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ABSTRACT

The purpose of this study was to determine for a sample of Montana families if a positive relationship existed between the family's socioeconomic status and its medical initiation behavior, and then, controlling for socioeconomic status, to determine if a relationship existed between initiation of professional medical care and a number of variables that perhaps affect the decision to visit the doctor or dentist. In the latter endeavor, a model suggested by McNerney and his colleagues was used to organize the analysis of several factors that may influence the decision to initiate medical care. A stratified sample of 574 families was surveyed. Persons in the lower classes have poorer health than the more privileged. Yet, many persons with low incomes go to doctors and dentists, some as often as or more often than those with greater incomes. The hypothesis proposing a positive relationship between the ability to pay as measured by the possession of health insurance and the initiation of professional medical care is supported by the data, but only with some modifications. The general hypothesis seems to be tenable for the lower status group in the sample, but does not hold true for the higher status families. The family in the higher socioeconomic status group tends to initiate medical care at about the same rate whether it has health insurance or not. (NL)

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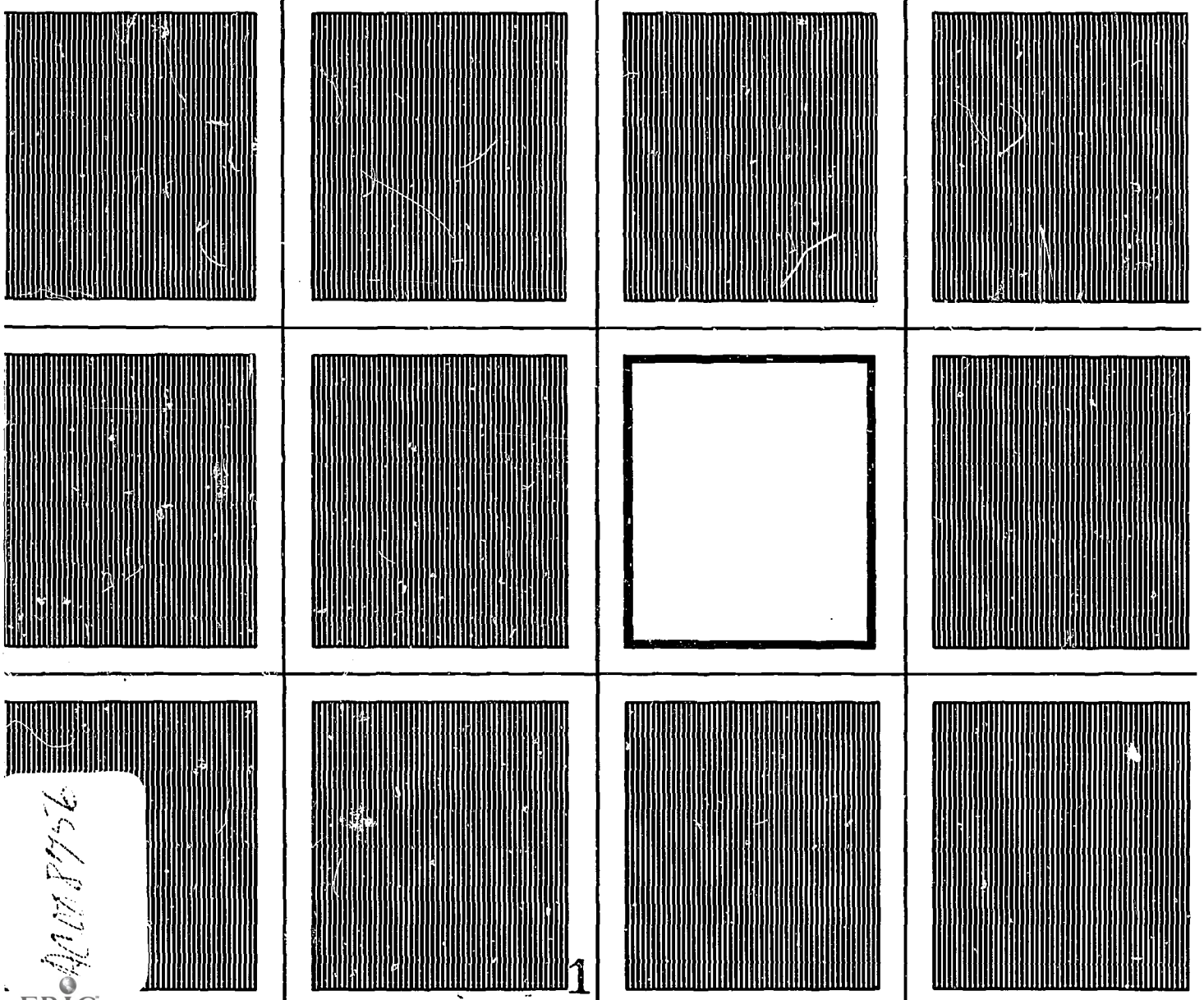

Socio-Economic Status And Related Variables That Influence The Initiation Of Professional Medical Care Among Montana Families

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I. INTRODUCTION

Persons in the lower classes have poorer health than the more privileged. Statistics compiled by the National Health Survey point up this basic difference in the state of health of members of lower income families compared to persons from families in higher income categories. Those in families with incomes below $2000 have approximately double the number of days of restricted activity due to illness as individuals in families with incomes over $4000. Persons in families with incomes between $2000 and $3999 are restricted about one-third more days each year than those in the next two higher income brackets. The same is true for bed-disability days (68). Low income persons are more likely to suffer serious disability and the resulting strains on family income and stability. For example, serious disability rates (inability to carry on the major activity) are six times as great in families with less than $2000 incomes than in families with incomes over $7000 (69).

Inadequacy of medical care received by individuals in low income groups appears to account for many of these differences. Since adequacy of medical care is clearly dependent on the availability of medical care facilities, access to trained medical practitioners, and the initiation of medical care at a time when diagnosis and treatment will have the best results, the lack of any of these may result in poor health. The first two conditions, while not always met completely in Montana, are not serious problems in most areas. For this reason the initiation of medical care, getting the potential patient into the treatment cycle, is the central concern of this study.

The research is designed to shed some light on factors influencing the individual decision to visit the doctor or dentist. No decision is made in a vacuum: a number of forces are operating on a person within his environment that affect the process of decision-making. The decision-maker, within some cultural context, assesses the power and cogency of such forces. This assessment of competing forces leads to a particular course of action — a change in the **status quo** (e.g., a visit to the doctor or dentist), a continuation of the **status quo** (e.g., "putting up" with the symptoms causing the discomfort), or perhaps the use of some other kind of medical help (home remedies, advice from the druggist, advice from family or friends, or a visit to some quasi-medical practitioner such as a chiropractor).

The decision to initiate professional health care is one that is likely to involve considerable cost. While most of the staple items in the average family's budget have increased in cost, medical care has gone up by an even greater amount. During the Fifties, for example, the consumer price index went up 12 percent, while medical costs jumped 36 percent, hospital costs 65 percent, and premiums for hospital insurance leaped 82 percent (41). The burden of such costs in relation to total income reaches significantly greater proportions for those in low income categories. The burden is especially great for the aged poor, the group in which chronic disease is commonplace. As the statistics mentioned earlier show, these costs, coupled with the relative inability to pay, may result in a poorer level of care and poorer health for the low income family.

While income is undoubtedly important in the decision to initiate medical care, explaining such a decision solely in terms of income leaves out two important considerations. First, the forces that operate in the decision-making process are quite different for individuals and families at different levels in the social structure, and income alone does not determine placement in the class system. The work of most of the stratification theorists, Weber, Pereto, Sjoberg, Warner, Kahl, etc., points up the fact that there are several criteria for the determination of class position. These usually include items such as education and occupation, as well as income. Therefore, the basic independent variable in this research will be socio-economic status, a factor arrived at by

including education, occupation, and income, rather than income alone.

Second, it is clear that many persons with low incomes do go to doctors and dentists, some as often as or more often than those with greater incomes. The same is true whether we use socio-economic status or income as the measure of class position. This fact suggests that there are a number of other variables, most of them related directly or indirectly to socio-economic status, that also enter into the decision to initiate professional medical care.

This research has two objectives: first, to determine for a sample of Montana families whether there is indeed a positive relationship between socio-economic status and in the initiation of professional medical care, and second, controlling on socio-economic status, to determine the relationship between the initiation of professional medical care and a number of intervening variables that may enter into the decision to visit a medical practitioner. Clarifying these relationships will be useful in two ways: (1) it will add substantively to our knowledge of socio-economic status by establishing to what degree a family's position in the social structure affects medical decision-making when illness occurs, and (2) it will give emphasis to a number of factors, related directly and indirectly to socio-economic status, that enter into the decision to initiate a visit to the doctor.

Poverty in Montana. Poverty takes on some very different aspects when it is found in Montana rather than in more populous states. One difference is the relative devaluation of symbols that have great meaning in more urban places. In Montana, for instance, houses may be less important than barns, automobiles less important than farm machinery or four-wheel drive vehicles, and style of clothes not important at all. Owning, training and riding horses for pleasure is more prestigeful than club memberships, for example. Automobile ownership is a matter of functional necessity in many parts of the state where great distances are the order of the day.

Poverty is less likely to result from lack of skills to do the sort of jobs usually found on the farms, in the forests, in the lumber mills, or in the mines, than from a shortage of jobs to go around. Poverty is often of a seasonal nature, since farming and the forest industry are usually seasonal employers. Hunting and fishing to provide meat, gardening and canning to provide vegetables, and unemployment compensation to provide money in the winter months is a common way of life for many low income families in Montana. The person from a low socio-economic group may live some distance from other persons in similar circumstances. He is usually not a slum-dweller; he is probably not conspicuously a member of a minority ethnic group (excluding a small Indian population largely confined to reservations), and he has probably lived in Montana, perhaps in the specific county, for some time. The description of this kind of poverty as it relates to initiation of medical care is a further objective of this research.

Review of the Literature

The generally poorer health of those in low socio-economic groups indicates a greater need among among these persons for professional medical care. It seems likely that the lack of good medical care for previous conditions may have contributed to the state of health in this group. The first section, then, is devoted to the literature dealing with socio-economic status and its relationship to health.

The second section reviews prior research on factors related to the initiation of medical care. This reported research deals with socio-economic factors as well as attitudinal variables related to the decision to initiate medical care.

Socio-economic Status and Health. Persons in low socio-economic families are more likely to have poor health. Clausen (7) emphasized this kinship:

> . . . Since the first studies of differences in mortality between the prosperous and the poor, no other single index of social characteristics has been so potent a predicator of health status as position in the social hierarchy.

MacDonald (41) has pointed out that low income individuals have much larger periods of disability time — time when they are severely limited in their major activity or unable to perform the activity at all. He also indicates that the very poor are subject to four times as much disability due to chronic illness as persons with average incomes. Lawrence (34) found in a twenty year demographic study of 1310 families in Hagerstown, Maryland, that the prevalence of chronic disease increased progressively from the well-to-do to the very poor. He also discovered that improvement in socio-economic status resulted in improved health. George (15) compared social statistics from Flushing, New York (a middle class area, 97.6 percent white), and the Bedford district of Brooklyn (a poor section, 36.9 percent white). He found that death rates were consistently higher for the Bedford group. Straus (62) reviewed poverty and health in rural areas using morbidity and mortality statistics and health studies on rural groups. He found that for the rural poor sickness has become a way of life, with poverty often giving rise to illness through contaminated water, isolation from urban projects of pest and insect control, lack of proper facilities for health care, and the inaccessibility of physicians.

Hollingshead and Redlich (21) studied the relationship between social class and mental illness in New Haven, Connecticut. The amount and degree of severity of mental illness were the greatest for the lowest class, while the level of sophistication and amount of treatment were the least. Beiser (5) points out a distinct relationship between psychopathology and socio-economic status:

> . . . The disintegrated poor suffer from a deficit in skills and recent studies indicate that their difficulties are further complicated by a plethora of symptoms — peptic ulcer, eczema and other psychophysiological reactions; palpitations, sleeplessness, apprehensiveness · nd depression, the hallmarks of psychoneurosis; alcholism and other conditions generally lebelled sociopathic.

Myers **et al.** (48) conducted a ten-year follow-up of 1565 psychiatric patients. The proportion of persons discharged from hospital treatment from the two highest classes was three times as great as in the lowest. Out-patients were concentrated in the middle and upper classes with nine times as many upper class patients receiving such treatment as lower class patients.

In his book, **The Health of Regionville,** E. L. Koos (29) reports a striking divergence between rich and poor in attitudes toward illness, health, and medical care in a small town in upper New York State. The lowest socio-economic class showed marked differences from privileged groups: (1) the lower the social class, the less sensitivity to symptoms, (2) a significantly greater proportion of Class III's reported a disabling illness, (3) only 32 percent of the Class III's reported having a family doctor as opposed to 82 percent and 73 percent, respectively, for the two higher groups, (4) 67 percent of the Class III's had changed doctors, while only 10 and 16 percent had changed in the two higher categories, and (5) the Class III's reported a much greater willingness to use substitutes for professional medical care, such as home remedies, druggists, or chiropractors. The home remedies used by this group were of the exotic kind rather than the standard items usually found in the home medicine chest.

Tyroler **et al.** (66) (67) reported a correlation between style of life and preventive health behavior in terms of acceptance of polio vaccine and in levels of carious tooth salvage. In the first instance there were significantly more lower class families with no family members immunized against polio. In the latter case the level of tooth preservation increased progressively when comparing non-white, white lower class, and white upper class groups. Suchman (63) substantiated that families with strong ethnic affiliation were more likely to have a negative orientation toward medicine. He also found that the lower classes practice substantially less preventive medicine than those in more privileged groups.

Initiation of Medical Care. There are striking differences between socio-economic levels in the way that individuals care for their health. In a study of the reasons why parents allow their children to take part in a nationwide test on the Salk polio vaccine, Deasy (9) discovered a markedly greater proportion of mothers from the lowest socio-economic level who refused to allow their children to participate. Mothers in the higher socio-economic levels were far more likely to have known about and taken preventive measures against the disease. Ross (52) points out that individuals from different income strata display substantially different health behavior patterns. The poor visit the doctor less and the dentist much less. Those with more modest incomes apparently get as much corrective treatment, but fail to add a large body of preventive care that is characteristic of higher income individuals. Myer and Cowles (47) indicate that, although low income families spend a considerable greater proportion of their income (about twice as much) for medical care, they still do not spend enough to assure good health.

Anderson (3), under the auspices of the Health Information Foundation, surveyed the distribution of health insurance and medical costs in the United States. One of his findings particularly significant in the area of initiation of medical care was that, up to a $7500 per year income, those without hospital insurance have 10 admissions per 100, while those with insurance averaged 13 admissions per 100. Anderson suggests that this difference " . . . is a measure of the impact of hospital insurance on hospital admissions today." In a later study comparing the effect on admissions of two different pre-payment plans, Anderson and Sheatsley (4) found that utilization of medical services differs with the type of services and method of operation. These citations suggest that not only does the presence of health insurance affect hospital admissions, but that the type of services also has a bearing on this kind of medical decision-making.

Turning to rural families, Lindstrom (39) in a study of dental care in Illinois, discovered that a sample from a cross-section of rural families received inadequate dental care. The concept of dental care as a "last resort" was very prevalent in this group. Kleinschmidt (28) found that while virtually all rural families have poor health, between one-third and one-half of all rural low income families had no medical or dental care whatsoever. Foreman (14) reported that, among low income rural Negro groups

in Mississippi, four times as many deaths occurred in the absence of medical care as in more privileged white groups. Clearly, rural families are less likely to seek medical care, are less likely to receive medical care, and are less healthy than those with greater resources. When the rural family is also poor, the problem is even more acute.

The specific decision to seek professional medical care is not well understood. In a study of Indiana farmers with heart disease, Veney (71) came to the conclusion that severity of illness was the only important determinant for deciding to visit the doctor. Mechanic and Volkart (44) tested two variables that they believed to be central to such a decision: (1) the amount of stress experienced by the individual, and (2) the individual's inclination to adopt the sick role. The effects of the two variables were also tested together. Their results indicated that, "Frequency of medical visits is a function of both variables, but, in general, the tendency to adopt the sick role is a more influential variable than stress." Ross (52) suggests four basic variables from his work on social class that relate to the decision to initiate medical care: (1) purchasing power, (2) special interpretations of illness (definition), (3) attitudes toward illness and orientation toward treatment, and (4) lack of knowledge and inability to use information effectively. Kutner and Gordon (33) attempted to delineate conditions under which care is sought for cancer symptoms. Their findings indicate that, while there is no difference in the rate of occurence of cancer symptoms in the various socio-economic strata, there is a significantly greater delay in seeking medical care by those in lower income groups. Delay in seeking care was also related to education and medical information when symptoms known to be associated with cancer are present.

In a study of dental care Kegeles (27) discovered that it was possible to predict behavior in seeking dental care using a number of variables, including socio-economic status, occupational status, previous behavior, "barrier factors" (fear of pain and anxiety about dental care), and motivational factors (including attitudes toward susceptibility, seriousness, possible benefits of care, perception of dental disease causation, and aesthetic concern). Previous behavior proved to be the best predictive variable. Those who viewed themselves as susceptible to dental disease and who felt that beneficial actions could be taken to prevent or alleviate the problem were more likely to seek preventive rather than symptomatic dental care. Socio-economic status, occupational status, and the barrier factors were also important predictors for differences in dental behavior.

In an effort to isolate some social bases of anxiety about illness, Levine (36) points out that " . . . the less educated, those who are acquainted with a victim, and those who feel they know a good deal about a malady tend to be more fearful than their opposites." The research also uncovered relationships between the availability of medical facilities, the perception of prevalence of disease and the anxiety displayed by those in the sample. Levine concludes that the community in which the individual lives exerts a subtle influence on his ideas about illness. He also indicates that at present we have little knowledge about the relationship between anxiety about health and the likelihood of doing something about it. Differing meanings of illness were also observed by Schulman and Smith (54) in their study of Spanish-speaking groups in New Mexico and Colorado. Among these people a high level of activity, a well-fleshed body, and absence of pain were criteria that indicated good health, regardless of any other symptoms present.

The decision of any person to seek out professional medical care appears to be a function of illness, plus a constellation of attitudes concerning the efficacy of medical care, the degree to which the individual perceives symptoms as indicating illness, his definition of good health, previously learned behavior toward the doctor, and the degree to which his socialization has prepared him to accept the patient role. All of these factors, of course, operate within a context of the person's ability to purchase expensive medical care. From the review of literature it seems that the "culture of poverty" may have a significant bearing on the operation of many of these variables. A summary table of variables correlated with the initiation of medical care contained in the literature review is presented in Table 1.

The Theoretical Framework

Some model incorporating the various aspects of the decision to initiate care is necessary. McNerney et al. (42) suggest such an approach in their analysis of medical facility utilization. Variables are grouped into three sets, judged to influence the use of medical facilities and services:

1. Physical need, dependent upon the incidence of illness, accident, childbirth, etc.
2. Ability to secure medical services, dependent upon resources (including health insurance), local availability, sick leave or other protection against income loss, etc.
3. Standards of medical care, or willingness to seek medical care, dependent upon the awareness of need, factors in the background of the individual or family leading to the inclination to seek medical care and to follow the advice obtained, etc.

Table 1. Variables correlated with the initiation of medical care.

Investigator	Ref. No.	Variables(s)	Direction of Relationship
Kegeles	(27)	a) Socio-economic status.	Positive
		b) Previous dental behavior.	Positive
		c) Susceptibility.	Positive
		d) Susceptibility plus belief in benefits of dental care.	Highly positive
		e) Occupational status.	Positive
		f) Fear of pain and anxiety about care.	Negative
		g) Aesthetic concern.	Low positive
		h) Seriousness.	Positive
Kutner	(33)	a) Income.	Positive
Gordon		b) Appearance of cancer symptoms in high income groups.	Positive
		c) Appearance of cancer symptoms in low income groups.	Positive
		d) Education.	Positive
		e) Medical information.	Positive
Koos	(29)	a) Social class.	Positive
Mechanic	(44)	a) Stress.	Positive
Volkart		b) Inclination to adopt sick role.	Positive, more influential than stress.
		c) Stress and inclination to adopt sick role operating together.	Positive
Myers et al	(48)	a) Social class.	Positive
Ross	(52)	a) Purchasing power.	Positive
		b) Differing interpretation of illness (cavalier attitude toward illness by lower class).	Positive, with increasing concern.
		c) Attitudes toward illness (scientific attitude of upper classes).	Positive
		d) Orientation toward treatment (intellectual treatment in upper class).	Positive
		e) Knowledge and use of information.	Positive
Schulman	(54)	a) Level of activity among Spanish-speaking groups.	Negative
Smith		b) Well-fleshed body.	Negative
		c) Absence of pain.	Negative
Suchman	(63)	a) Socio-economic status.	Positive
		b) Ethnocentrism.	Negative
Tyroler	(66) (67)	a) Race and social class.	Positive, with medical visits rising progressively through non-white lower class, white lower class, white upper class.
Veney	(71)	a) Illness in the form of severe symptoms.	Positive

As indicated in the review of literature, these factors are operative within the sub-culture of the decision-maker. Persons socialized within the "culture of poverty" are likely to differ considerably from those in more affluent situations in all three of the areas included in the model. In order to control for such differences, a model is used in this research that integrates McNerney's three factors with socio-economic status, making it possible to establish the basic relationship between socio-economic status and initiation of medical care, as well as analyze the influence of the three sets of variables separately. This is done by first establishing the relationship between socio-economic status and initiation of care, and then controlling socio-economic status throughout the rest of the analysis. A perusal of the McNerney model shows that all three of the factors are related directly or indirectly to socio-economic status which fits with the objectives of the research as previously discussed.

In the modified version, presented in Figure 1, the three factors suggested by McNerney are changed somewhat to include the following.

1. Ability to pay and secure needed medical services, dependent upon availability of services, income, availability of assets for use in purchasing services, health insurance, etc.

2. Perception of illness, dependent upon the presence of symptoms, a degree of discomfort or disability, recognition of the symptoms as indicators of disease, information regarding symptoms, diseases, etc.

3. Willingness to enter the treatment cycle, dependent upon factors operating in the sub-culture of the individual or family that influence the decision to seek care, including the individual's view of the value of medical care, his perception of his ability to influence the outcome by individual effort, etc.

This model is used to organize the analysis of factors affecting the initiation of professional health care. It finds its greatest usefulness in providing a vehicle for the analysis of a number of intervening variables that operate in the process of deciding to initiate professional medical care. Thus, this analysis incorporates an important set of factors that influence the relationship between socio-economic status and the decision to enter the treatment cycle.

The Hypotheses

As the literature review points out, and as a number of statements about poverty have made clear, persons in low income classes tend to neglect health care that would be "usual behavior" for those in more privileged classes. The commonplace explanation that, "they just can't afford to go to the doctor," seems to have some validity. The literature also makes clear, however, that other factors enter into the decision to visit the doctor. To test these assumptions, the following basic hypotheses are proposed:

1. There is a positive relationship between the decision to initiate professional medical care and the socio-economic status of the individual or family involved in the decision.

2. The decision to initiate professional medical care is a function of the perception of illness, the ability to pay for medical services, and the willingness to enter the treatment cycle possessed by the individual or family involved in the decision.

Socio-economic Status and the Initiation of medical care. Testing the first hypothesis serves two purposes in this research: it serves to replicate the findings of many of the researchers mentioned in the literature review on a sample of Montana families, and it allows for the control of socio-economic status in the analysis of the variables included in the elaborations on the second general hypothesis.

Lack of financial resources leaves much to be desired as the sole explanation for not seeking medical care. Since the concept of socio-economic status is a composite of a number of variables such as occupation, style of life, income, and place of residence, using the concept as the only independent variable represents a form of reductionism. While it is important to demonstrate this relationship, it is also important to relate some of the factors that motivate behavior to the decision to initiate medical care. These factors are largely shaped, through the socialization process, by the sub-culture to which the individual or family belongs, thus providing the rationale for controlling socio-economic status in the various elaborations on the second hypothesis.

Elaborations on the Second Hypothesis

Ability to pay. In a modern industrial society there is no one-to-one relationship between income or other economic factors such as savings or investments and the ability to pay for medical care. There are a number of poor people who are able to pay for medical care. Those having group hospital and medi-

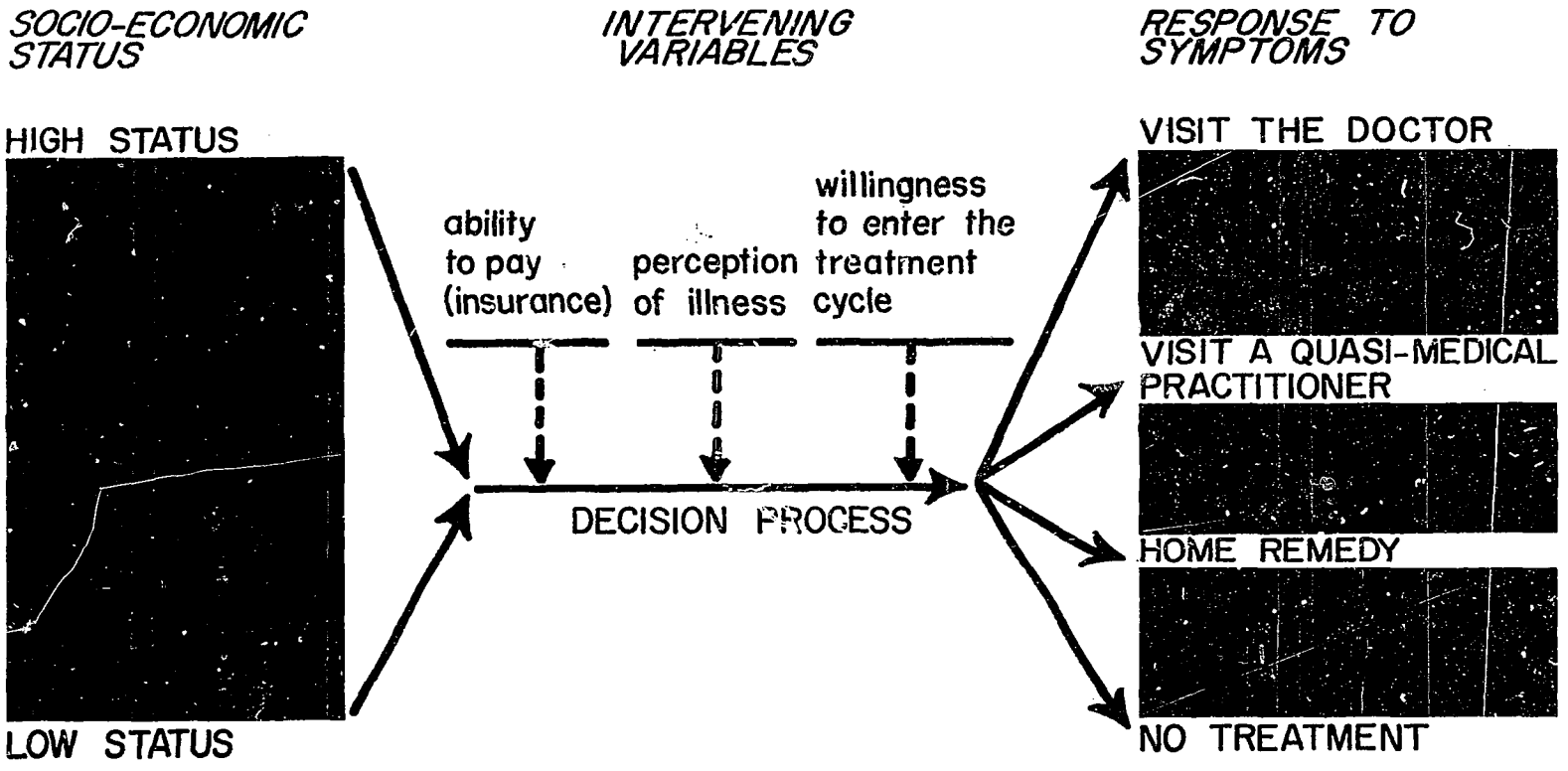

Figure 1. Model for the Response to Symptoms.

cal insurance through their place of employment, persons whose medical expenses are paid by welfare agencies of various sorts, members of groups supported through government channels such as veterans and Indians, and those covered by Medicare are some examples of persons who enjoy the ability to pay without the economic stature to account for it. These kinds of factors modify in some way the relationship between socio-economic status, which includes income, and the initiation of medical care.

2a. Ability to pay: The individual or family that has health insurance tends to initiate professional medical care more readily than those that do not have health insurance.

Perception of illness. Anderson and Eichhorn (13) suggest that the more information an individual possesses about medical care and about the specific medical problem with which he is faced, the more likely he will see a course of action which could lead to a solution of the problem. These researchers indicate two reasons for this relationship: (1) increased information leads to increased **salience** (the extent to which the person realizes that the problem exists), and (2) increased information leads to increased **specification** (understanding of the aspects of the medical problem). For example, cardiacs display greater knowledge about heart disease than noncardiacs. They also are more concerned about symptoms; that is, symptoms have greater meaning to the person who knows he has heart disease. In a sparsely populated state such as Montana, health information is particularly difficult to obtain. Even the mass media are not available in many remote places. These factors indicate that health information may be a particularly cogent variable in medical decision-making in Montana.

2b. Health information: The individual or family that possesses greater health information tends to initiate professional care more readily than those that lack such information.

Age is often an important variable in studies dealing with medical care and health practices. This is so for two reasons: (1) many diseases are age-related, and (2) older persons often retain a value system learned at an earlier point in time which may not allow appropriate perceptions of symptoms, diseases, and possible treatments today. Older persons are far more likely to have chronic diseases than younger persons. Such diseases often are characterized by multiple symptoms, perhaps resulting in a decreased likelihood for older persons to define symptoms as indicating a real need to visit the doctor. Older persons are also less mobile than younger persons; it is physically more difficult for them to reach the doctor or hospital. Furthermore, persons of advanced age have more limited resources than do younger people. They are less likely to have adequate income, health insurance, or other third-party resources than those in working age groups.

2c. Age: Families headed by older persons are less likely to initiate professional medical care than those headed by younger persons.

The nature of the community in which the decision-maker lives may have a substantial effect on the decision to visit the doctor or put off the visit. Kraenzel (28) has suggested that persons who live in Yonland areas (isolated areas away from centers of population and lines of transportation) are willing to pay a high social cost for the spacious area in which they live. These costs, he claims, include such items as poorer medical services and poorer sources of information. Persons in more isolated areas might be expected to settle for less in the way of professional medical care, as well as a poorer quality of service. For whatever reasons (lack of facilities, a high value placed on self-sufficiency, lack of information, etc.), we might conclude that there is a relationship between the nature of the place of residence and the initiation of medical care.

2d. Place of residence: Families that live in more urban areas of residence are more likely to initiate professional medical care.

Willingness to enter the treatment cycle. The potential patient's attitudes toward medical practitioners, established by the success or failure of past experiences with doctors, plus vicarious experiences with the medical profession through such means as the mass media, have some effect on the individual's decision to seek medical care. The doctor-patient relationship involves a number of core values, since the well-being, perhaps the life itself, of the patient is at stake. The meaning of the doctor patient relationship to the participants has been discussed by several social scientists (16) (47). There has, however, been little done to relate these meanings to the actions of the patient in his decision to interact with the doctor or dentist. If past relationships with the doctor have been rewarding, it should lead to a greater willingness to initiate this kind of relationship at some later time.

2e. Attitudes toward doctors: The individual or family with favorable attitudes toward doctors tends to initiate professional medical care more readily than those that do not have favorable attitudes toward doctors.

A visit to the doctor may result in a prescribed medical regimen that includes reduced work. Knowing this, the patient may put off such a visit or not make one at all, depending on the strength of the value he attaches to work. The low income person may view any loss of time from work as a serious blow to his own or his family's well-being. Besides the financial aspects of loss of work, an individual's occupation may have a significant effect on other values important to him. Even those in fortunate economic circumstances may place an inordinately high value on being able to keep working. Several studies from the Purdue Farm Cardiac Project illustrate the power of such attitudes. A strong identification with work appears to affect all sorts of decision-making on the part of farmers, including decisions to follow medical regimens, innovations of new farming methods, and retirement (1) (11) (13) (50). In this research the sample, coming from sparsely populated area, may reflect the findings in rural Indiana, or may, indeed, modify the findings because of the great differences between the intensive farming of Indiana and the isolated and extensive nature of ranching and farming in Montana.

2f. Attitudes toward work: The individual or family that has positive attitudes toward work tends to initiate professional medical care less readily than those that do not have such attitudes.

Education has as one of its primary objectives the creation of awareness in the educated person of the available resources for problem-solving. The person who has a favorable view toward the educational process, which is designed to produce individuals with expertise, would also be likely to have a favorable attitude toward the doctor who has expertise, and, consequently, use his services more readily than the person who does not favor education.

2g. Attitudes toward education: The individual or family that has favorable attitudes toward education tends to initiate professional medical care more readily than those that do not have favorable attitudes toward education.

Suchman (63) has reported that persons with parochial views were more likely to report illness than persons with cosmopolitan views. He does not make clear, however, any relationship between a parochial view and the initiation of medical care. A parochial view toward the world seems to point to a devaluation of change, including the rapidly changing nature of medicine. The cosmopolitan person, on the other hand, would be more likely to have a positive attitude toward change through greater acquaintance with it, including a more favorable view of medicine with its emphasis on the acquisition of new knowledge and methods through research.

2h. Parochialism: The individual or family that maintains a parochial view toward change tends to initiate professional medical care less readily than those with a more cosmopolitan view.

The meaning of any phenomenon for any individual is made up of a constellation of learned symbol systems and responses to those systems called attitudes or beliefs. W. I Thomas (65) posited that reactions to phenomena, sets of stimuli, are limited by the definition of the situation established by the perception of these stimuli, and that any actions resulting from such a definition are similarly limited. Since a definition must exist prior to an action, any action taken is a function of the individual's perception of himself in relation to the perceived environment. This perception is selective and conditioned by the success of prior definitions and actions learned throughout the socialization process (38) (43). A definition of illness, then, requires that the persons experiencing the symptoms have previously had knowledge regarding such symptoms and defined those symptoms as meaning illness. An action based on such a definition must have a successful precedent of some sort to be chosen as a course of action in response to the present definition of illness. Among low income groups, initiating a visit to the doctor as a normal course of action in response to a definition of illness is probably sharply limited by the person's (or family's) past and present ability to do anything constructive about the illness. Due to their overall inability to solve problems of many types presented by the environment, a feeling of apathy and helplessness is often characteristic of the poor. This sense of hopelessness and powerlessness in the face of an apparently hostile world has been called alienation (25) (74).

Little definitive research has been done on the concept of alienation. Seeman (55) (56) distinguishes five meanings of the term that appear in the literature. These five meanings include powerlessness, normlessness, isolation, meaninglessness, and self-estrangement. He does not suggest, however, how the differences between these concepts may be empirically measured, nor does he suggest operational measures for the five concepts at all.

Power can best be viewed as the probability held by an individual that his own behavior can influence the outcome of events. For the powerless, the situation has been defined as being beyond the control of the person involved, with the goal being unattainable through direct effort (74). For our purposes the goal is "getting well" and powerless-

ness is a sense of being able to manipulate the environment to reach the goal. For the powerless person or family, the seeking of professional medical care may have little to do with getting well, thereby causing its rejection as a possible course of action. Why waste the family's meager resources on doctors when you will die or get well anyway? While the relationship between powerlessness and the initiation of health care has not been studied, it has been researched in relation to the voting patterns of the poor. Low income persons consistently indicate that they believe their vote to be unimportant. When aroused to vote, they tend to vote negatively, (e.g., they vote against changes such as fluoridation measures, school bond issues, etc.) (22) (35). It should be possible to demonstrate a similar relationship between powerlessness and the initiation of medical care.

2i. Powerlessness: The individual or family that feels powerless tends to initiate medical care less readily than those that feel able to bring about change through their own efforts.

As previously mentioned, the analysis of the elaborations on the second hypothesis is carried out holding socio-economic status constant to prevent confounding of any relationships that are detected between the intervening variables and initiation of medical care.

II. METHODOLOGY

Data necessary to test the hypotheses in this research could be collected in several ways. Case studies in cooperation with medical practitioners would seem to be capable of producing data with good control of extraneous factors. However, obtaining a large enough sample in this way is not economical for several reasons, including lack of time, difficulty in obtaining doctors' cooperation, absence of financial support, and the lack of trained researchers needed to obtain valid and reliable data in interview situations. As a compromise, the survey was used. While the survey has the disadvantage of taking a "slice out of time" (a distinct problem where the independent variable is initiation of medical care over time), the advantages of lower cost and larger sample offset the disadvantages in this case. To describe clearly the approach used in this research, the following section is divided into five parts: (1) a description of the population, (2) the sampling procedure and the final sample, (3) the field procedures, (4) the indexing procedure for the variables used in testing the hypotheses, and (5) the statistical approach.

The Population

Montana is a state dramatically divided in both a geographic and economic sense. The eastern portion of the state is often called the "high plains" and is similar geographically to North Dakota and the Canadian "prairie provinces." The western region is very mountainous, interspersed with river valleys of limited area. The primary industry is agriculture, including large cattle ranching and wheat raising operations, and some irrigated cropland in the river valleys. This is particularly true of the eastern Montana plains country. In the western region agriculture is of less importance, with forest industries and mining taking on added significance. Population is sparse except for a few "oases" in the larger cities (30). The three counties selected for this research are representative of the state in these important respects: (1) the region where the county is located, (2) the type and importance of agriculture in the country, and (3) the presence and size of a center of population in the county.

Ravalli County is essentially rural in nature. The largest town is Hamilton, the county seat, with a population of about 2500. Ravalli County is located in the westernmost part of Montana, bordering on the state of Idaho on its western and southern sides. The county has a varied economic base, including a substantial amount of irrigated farmland, some dryland wheat farming, a large forest products industry, and a steady government payroll at the Rocky Mountain Laboratory and in the Forest Service.

Fergus County is located in the center of the state. Its largest town, Lewistown, has a population of about 7500. The major industries in the county are cattle raising and wheat ranching. The population of Fergus County is divided between urban and rural dwellers, with the towns in the county largely dependent on the agricultural industry in the area.

Cascade County contains the largest city in Montana, Great Falls, which has a population of about 60,000. Although Great Falls is the center of a substantial wheat and cattle raising district, it is also the home of a large Air Force base and Minuteman missile complex. These sources make the city and county recipients of a large and continuous government payroll. Cascade County also shares to some extent in the development of the oil industry in Montana. The city of Great Falls contains most of the population in the county. Over 90 percent of the sample comes from the city itself, reflecting the nature of the population distribution in Cascade County as a whole.

Cascade County is located in the northcentral section of Montana. While it borders on a mountainous region, it is generally considered a plains county.

Fergus County is also largely a plains county with a substantial mountainous area bordering the region. Ravalli County, on the other hand, is a valley almost entirely surrounded by rugged mountain ranges.

The Sample

The sampling procedure. A stratified sample of 574 families was surveyed. Approximately equal numbers were interviewed in each of the three counties (Table 2). About one-half of the families came from low socio-economic categories. The other half of the sample was drawn from lists of families in middle and upper socio-economic groups (Table 3).

The sampling list of low socio-economic status families came from a number of sources, including welfare rolls, the "Headstart" program, the Neighborhood Youth Corps project, the Job Corps application lists, the employment office, and school counselors. The last source was particularly good for acquiring names of younger families in low income categories. The welfare rolls, while easy to obtain, contain a large proportion of older, ill, and disabled persons. Generally speaking, the names of young, rural, low income families were the most difficult to obtain for sampling purposes.

In the case of average and above average income families, several sources were also available. However, after consulting with each of the other researchers who had conducted surveys in these areas, the telephone book was selected as the best source for these families. The community directories, available in only two of the counties, are far more likely to contain names of low income families than the telephone lists. The same is true for the power company list of subscribers. Another advantage of the telephone book is its accuracy. The new telephone book became available just before this study began, resulting in a very low rate of error in the actual availability of families selected for the sample.

The sample characteristics. The final sample totaled 574 families. About one-third of the sample was obtained in each of the counties surveyed. The intention in the sampling procedure was to oversample low income families. The final sample reflects this intent, with 221 of the responding families reporting an income below $3500. The next largest income group was the $5000 to $6000 bracket with 136 respondents. The mean educational level of the family heads was "some high school," which also reflects the over-sampling of the low income group. The age of the family heads was spread normally over the three categories. About one-quarter of the family heads fell into the "under 40" and "over 65" brackets, with the other one-half of the family heads in the 40 to 65 age group. Ninety-nine of the respondents indicated that they were retired. The over-representation of families with low income in the sample probably accounts for this fairly large group of retired respondents.

The general characteristics of the sample are presented in Tables 2 through 8.

Table 2. Number of families interviewed by county.*

County	Percent of Sample	Total Population
Ravalli	33	12,341
Fergus	33	14,018
Cascade	34	73,418
Total %	100	
N:	(574)	

* The responses were usually given by the head of family or another adult member and are concerned with the whole family rather than the respondent alone.

Table 3. Number of families by income.

Reported Income	Percent of Sample	Percent in Montana
Below $3500	39	26
$3500 to $4999	17	19
$5000 to $6999	24	25
$7000 to $9999	12	19
Over $10,000	7	11
No Response	1	—
Total %	100	100
N:	(574)	(165,777)

Field Procedures

The preliminary work for this research was carried out between October, 1965, and March, 1966. This included the necessary library research, the establishment of broadly defined areas to be covered, the preliminary listing of concepts and hypotheses for test, and the preparation of the necessary research proposal. When finances became available, several initial trips were made to the counties selected for the survey. Contacts were established and partial sampling lists were compiled. Preliminary copies of the interview schedule and questionnaire were constructed, pretested, revamped, and printed during the first part of March, 1966. In its final form the entire interview could be administered in about 40 to 60 minutes, with some interviews lasting slightly longer.

The interviews were conducted on a face-to-face basis. The questions on the interview schedule

Table 4. Number of families by socio-economic status.

Socio-Economic Status*	Percent of Sample
High	52
Low	48
Total %	100
N:	(574)

* For a description of the socio-economic status index, see pp. —. Because of the indexing procedure followed for this research, corrospending data for all Montana families were not available.

Table 5. Number of families by sex of family head.

Family Head	Percent of Sample	Percent in Montana
Father	74	91
Mother	25	7
Both	0	0
Other	1	2
Total %	100	100
N:	(574)	(165,777)

Table 6. Educa[illegible] of family head.

Education of Head	Percent of Sample	Percent in Montana
Less than 8th grade	11	13
8th grade graduate	25	22
Some high school	19	17
High school graduate	25	28
Some college	12	12
College graduate	7	8
No response	1	—
Total %	100	100
N:	(574)	(165,777)

were asked by the interviewer who indicated the answers on the schedule. After the interview was completed, the respondent was also asked to fill out a short questionnaire. This instrument contained items regarding income, occupation, education, land ownership, etc. It also included a section containing semantic differential scales. The inclusion of a separate questionnaire was decided upon for two reasons: the pretest has indicated that we were likely to

Table 7. Age of family head.

	Percent of Sample	Percent in Montana
Below 40	28	51
40 to 65	46	35
Over 65	26	14
Total %	100	100
N:	(574)	(165,777)

Table 8. Occupation of family head.*

Occupation of Family Head	Percent of Sample
1. Professional, businessmen, manager, etc.	3
2. Small businessmen, teachers, large farms, etc.	8
3. Salesmen, minor officials, clerks, etc.	8
4. Foremen, skilled laborers, etc.	14
5. Store clerks, semi-skilled laborers, etc.	22
6. Policemen, taxi drivers, waitresses, etc.	13
7. Unskilled laborers	11
8. Retired	17
9. No occupation	4
Total %	100
N:	(574)

* The occupation of family head was catagorized according to Warner's Revised Occupational Rating Scale. A discussion and chart describing the scale and its use is to be found in Warner, L., *Social Class in America: The Evaluation of Status*. New York: Harper Torchbooks, The Academy Library, 1962, pp. 121-159. Occupation broken down by family heads was not available for Montana as a whole.

get better cooperation on these kinds of questions if the respondent could write the answers rather than speaking to an interviewer, and it was necessary for the respondent to mark semantic differential scales personally. All respondents filled out both the interview schedule and the questionnaire.

When the sampling lists were complete, each potential respondent was assigned a number. A list of random numbers was then employed to select the sample. The size of the sample, based primarily on financial consideration, was approximately 600 families, 200 in each county. Since total loss figures for surveys with far greater finances tend to run between 10 and 20 percent, a tentative sample of 300 families was drawn for each county, 150 families in

each of the socio-economic groups to be interviewed. Refusals, not-at-home on second calls, and those who had moved were replaced from the randomly selected pool of families of the appropriate socio-economic category. The limitation to only two calls was made on the basis of cost-time considerations as suggested by Stephen and McCarthy (60). Replacement was necessary for 38 percent of the respondents in the lower socio-economic group and 17 percent in the upper group. The largest number of replacements was made in Fergus and Cascade Counties which were surveyed during the summer vacation period. Refusal rates were below the 10 percent average suggested by Stephen and McCarthy, running slightly over 8 percent. The final sample represented a sampling fraction of approximately 2 percent in the upper socio-ecnomic category and 9 percent in the lower group. Both parts of the interviews were completed by all respondents.

Measurement of Variables

In all but five cases the head of the family or spouse was the primary respondent. Each interviewee was asked to respond to a rather detailed series of questions concerning health practices and preventive medical care. The respondent was also asked to report symptoms experienced by family members during the previous year and the disposition of those symptoms. Whenever a positive symptom was reported, it was learned whether the symptom received: (1) no treatment, (2) treatment by a medical practitioner, (3) a home remedy, or (4) treatment by some quasi-medical practitioner. A number of forced-response items concerning attitudes about medical care, professional medical practitioners, and the like were also answered during the interview.

The dependent variable. The dependent variable in this research is **initiation of medical care.** An index for this variable was obtained by comparing the presence of symptoms to the reported disposition of the symptoms. Since the symptoms described are of a serious nature — serious enough that any of them should bring about a trip to the doctor or dentist — a comparison of the reported symptoms with their disposition provides an index of the respondent's or his family's readiness to visit the doctor or dentist.

The "symptoms approach" for measuring this kind of variable has been used extensively in prior studies. Two examples of this method are studies done by Charles R. Hoffer (19) (20) of Michigan State University, presented in bulletins from the Michigan Agricultural Experiment Station. The symptoms approach is not intended to diagnose the exact nature of any illness. It is intended to indicate the need for medical care. The symptoms list employed by Hoffer is used in the present research. This list was originally developed by rural sociologists in the Department of Agriculture assisted by physicians (53). Hoffer added five to the original list of 22 symptoms. The list itself was validated by Hoffer who had a random sample of persons come in for clinical examinations after having previously responded to the symptoms list. In his sample there was an agreement between the symptoms list and the clinical examinations in 85 percent of the cases (19).

The independent variable. The independent variable is **socio-economic status.** Attempts to classify families into socio-economic strata have not always met with success. Edwards (12) prepared a rating scale for occupations as a measure of socio-economic status. Centers (6) presents a somewhat modified scheme for classifying individuals according to occupation. Warner, recognizing the inadequacy of using only occupation to form an index, created a revised scale called the Index of Status Characteristics. This scale took into account the four factors of income, source of income, type of house, and dwelling area.

The federal government has depended primarily on income to classify families for its welfare and educational programs. Local agencies have also tended to use the federal classification system. At present the government defines an incomes of less than $3500 in rural families and $5000 in large urban families as constituting a poverty situation.

For the purposes of this research, socio-economic status is scaled on the basis of three factors: reported income, education, and occupation. The scale is constructed as a dichotomy consisting of the low socio-economic status group (about 50 percent of the sample) and the high socio-economic status group. Inclusion in one or the other group is determined on a cumulative basis, weighting reported income, occupation, and education equally. While the scale is dichotomized, the responding families are distributed continuously along the scale. The categorization of occupation is made according to Warner's Revised Occupation Rating Scale, and education according to grade completed in school by the family head.

The intervening variables. The intervening variables are grouped according to the model used in the presentation of the hypotheses. In the section on perception of illness, age and place of residence are established by direct inquiry. The **health information** variable is a scale taken from reading habits in relation to health care combined with knowledge about health matters. Single items are also used as indices for this variable to prevent the obscuring

of pertinent data through using a scale as a representation of the variables.

Ability to pay is indexed by the reported holding of health insurance. This index is used to represent the ability to pay even though socio-economic status does not indicate that such ability should exist in a given family. Reported income is also used as a measure of ability to pay.

Under the section willingness to enter the treatment cycle, **attitude toward doctors, attitude toward work, attitude toward education, parochialism,** and powerlessness are represented by Guttman scales. In several instances cross-tabulating single items with initiation of care resulted in important findings in the data. These individual items are also reported as indices of the variables.

Guttman scaling is a method intended to measure the undimensionality of some variable. If a Guttman scale can be discovered (i.e., it has a reproducibility coefficient of .90 or better), it allows the researcher to place any respondent accurately in relation to others with respect to the variable in question. There are two fundamental advantages resulting from the use of Guttman scales: first, the predictability of all responses to all items on the scale is known by knowing the last response (within the limits of the reproducibility coefficient), and second, the Guttman scale is a measure of degree—by sampling the universe of content at different levels, the method gets at attitudes by determining the totality of response to individual items.

The Statistical Approach

The measures of the variables used in this research are ordinal in nature. This suggests the use of a non-parametric statistical test for relationship. In the case of the basic hypothesis relating socio-economic status to initiation of medical care, a X^2 test of significance was used. This test is particularly applicable in this case because the data are expressed in frequencies. The degree of freedom for this test are determined by the formula:

$$df = (r - 1)\ (c - 1)$$

where r = the number of rows in the contingency table
c = the number of columns in the contingency table.

The expected frequencies are obtained by manipulating the marginal totals. This allows for the computation of the X^2 by the formula:

$$X^2 = \sum \frac{(O-E)^2}{E}$$

The five percent level of significance is used to reject a hypothesis of no difference.

In the analysis of the intervening variables, three classes of variables are considered: (1) the dependent variable, initiation of professional medical care, divided into two groups of "high" and "low" initiators, (2) the independent variable, socio-economic status, divided into two categories of "high" and "low" status, and (3) the intervening variables, the characteristics and attitudes of the respondents as measured by scales constructed from items included in the questionnaire and interview schedule and from single items used as indices. Throughout the analysis the dependent variable is referred to as Factor A, the independent variable as Factor B, and the intervening variables as Factor C. (For this portion of the analysis, the independent variable, socio-economic status, is controlled, and the intervening variables become, in effect, independent variables.)

If initiation of medical care and socio-economic status are considered fixed and the intervening variables random, an X^2 statistic may be partitioned in a manner closely resembling an analysis-of-variance table. This method is suggested by Winer (73). The degrees of freedom are partitioned as follows:

Source	Degree of Freedom	
Total	(pq-1)	(r-1)
AC	(p-1)	(r-1)
BC	(q-1)	(r-1)
ABC (p-1)	(q-1)	(r-1)

The Total X^2 is made up of three components, the AC interaction, the BC interaction, and the ABC interaction. A significant X^2 value (i.e., one whose probability of occurring is less than .05) will usually indicate that there are one or more significant interaction X^2 values. The ABC interaction term is acquired by the formula:

$$ABC = Total - AC - BC$$

In each of the tables the percentages which make up the Total, the AC, and the BC Chi squares will be shown.

A significant X^2 value for the AC interaction suggests a relationship between whatever intervening variable is being considered and initiation of professional medical care. Since the statistic is constructed for each level of socio-economic status, a significant AC interaction indicates a relationship between the A and C factors not affected by socio-economic status.

A significant X^2 value for the BC interaction suggests a relationship between the socio-economic

status and the intervening variable being tested. For example, if the intervening variable being considered is age, a significant BC interaction would indicate a relationship between age and socio-economic status.

A significant ABC interaction indicates that the AC or BC interaction differs as a function of the intervening variable being used. Using the foregoing example, a non-significant ABC interaction would indicate that a significant AC interaction shows that higher socio-economic status families with older heads do not differ in their initiation behavior from higher socio-economic status families with younger heads. On the other hand, a significant ABC term suggests confounding, and requires a test of the simple effects of the AC interaction at each level of the control variable. That is, a summary table showing the AC interaction for both the high socio-economic and low socio-economic groups should be presented to clarify the relationship between the dependent and intervening variables. When this sort of test is necessary, however, there is no way to test for the entire AC and BC interactions.

Winer points out that if each of the expected cell frequencies is greater than 5, the sampling distribution for the statistic is closely approximated by the X^2 distribution. If only a small number of the expected frequencies are less than five, the X^2 approximations will still be good (73). In this research the relatively large sample precludes finding many small cell frequencies. Consequently, the X^2 distributions should give good approximations in this case.

III. SOCIO-ECONOMIC STATUS AND THE INITIATION OF PROFESSIONAL MEDICAL CARE

This section is intended to answer three questions about lower socio-economic status groups. First, who are they? In what significant ways do they differ from the higher socio-economic status groups? A demographic comparison of the two groups may provide some insight into basic differences in the way each acts toward medical problems. Second, how does socio-economic status relate to initiation of medical care? Are lower socio-economic status families less likely to initiate medical care in response to symptoms of illness? It is necessary to determine whether or not the fundamental contention that there is such a relationship has any validity in the present case. Third, how does socio-economic status relate to health practices? What are the differences in the two strata in terms of preventive health care and general medical care? The purpose of this chapter, then, is to provide a description of the lower socio-economic status group from the survey data, to test the hypothesis relating socio-economic status to initiation of medical care, and to show how the lower socio-economic status group differs from the higher in terms of health practices.

Traditionally, the poor have been characterized as persons having lower levels of education, less desirable jobs, and an inability, both financial and social, to meet the demands placed upon them by their environment. The lower status person in Montana is accurately described in these terms int some respects but not in others. Several of these characteristics are discussed below.

The independent variable, socio-economic status, is dichotomized. In this index the family is classified according to reported family income, education of the head of family, and occupation of the head of family. Each of these factors was given equal weight. Of the total sample of 574 families interviewed, 298 (52%) were classified in the high socio-economic status group, and 276 (48%) in the low socio-economic status group.

Age of family head. Family heads from the lower status group are generally older than those from the higher status group. As Table 9 points out, the significance of this relationship exceeds the .001 level of probability. As the distribution of occupations in the Warner scale shows, (see Table 8), there are a number of retired family heads in the sample. It is probable that the differences found in Table 9 are the result of the lower fixed incomes usually attached to retirement.

Geographic Mobility. Montana has a fairly stable population. While there is some exodus in the 18 to 25 age group, there is also some return in the 30 to 40 age group. This stability is reflected in the sample as a whole, and is particularly noticeable in the

Table 9. Age distribution of family heads by socio-economic status.

	Socio-economic Status	
	High	Low
Age of Family Head	Percent of Sample	
Below 40	37	18
40 to 65	53	39
Over 65	10	43
Total %	100	100
N:	(298)	(276)
	$X^2 = 83.11$	$P < .001$

lower status group (see Table 10). These families are not fly-by-night migrants. Over three-fourths of the families in this group have lived in the same county for over ten years. The upper group exhibits somewhat greater mobility. This greater geographic mobility may reflect age factors and social mobility as well. Since the higher status family heads are younger, it seems likely that geographic mobility does not represent as great an obstacle to them. Further, the occupational roles in sparsely populated areas are quite limited, forcing the upwardly mobile family to be more geographically mobile in its upward climb. Included in this group are a number of professional persons working on government projects. This is particularly the case in Ravalli and Cascade counties where the Forest Service, government laboratories, the Air Force base, and missile complex attract a number of professional persons, many of whom will remain in the state for only a short time.

Landowning. Owning land has always been valued in the West. The original settlers came to obtain free land, and holding property remains an important status symbol for the Montanan today. The low socio-economic status group in this sample is less likely to own land than those in the higher status group, as Table 11 shows. (Land ownership was not restricted to large amounts, but also included city property.) It is interesting to note that the retired low status persons are even less likely to own land than the lower status group as a whole (34 percent for the retired persons versus 48 percent in the entire lower status group). However, a rather high percentage of low income families do own land. This fact lends considerable substance to the picture of "stable poverty" in the Mountain Region, including a willingness to accept the status quo (i.e., low income and a higher social cost) in return for the privilege of living in an uncrowded rural area.

Sex of Family Head. The lower status group in this study shares with other poverty groups a greater likelihood that the mother will be the head of the family. It is not established from the data whether the lack of the income provided by a father causes poverty or poverty brings about divorce and desertion. In a few cases the mother is designated as head of family where a father is present. Table 12 presents the data.

Social Integration. It has been suggested that one reason for stable or organized slums is that inhabitants receive a great deal of psychological support from their own family and ethnic or racial groups. In such a situation a move from the slum may result in some form of anomie and resultant anxieties (46) (15). The lower socio-economic status group in this study also appears to be well integrated in the neighborhood and community. As Table 13 shows, the lower socio-economic status respondents report somewhat fewer relatives living nearby, but no significant differences in the amount of interaction with relatives are apparent from the data.

For comparison, Litwak (40) reports that socially immobile families from the upper socio-eco-

Table 10. Length of Residence in the county by socio-economic status.

	Socio-economic Status High	Low
Length of Residence in County	Percent of Sample	
Less than 1 year	7	6
1 to 5 years	15	10
6 to 10 years	12	7
Over 10 years	66	77
Total %	100	100
N:	(298)	(276)
	$X^2 = 7.99$	P <.05

Table 11. Land ownership by socio-economic status.

	Socio-economic Status High	Low
Landownership	Percent of Sample	
Landowners	75	52
Non-landowners	25	48
Total %	100	100
N:	(298)	(276)
	$X^2 = 32.83$	P <.001

Table 12. Sex of the family head by socio-economic status.*

	Socio-economic Status* High	Low
Sex of Family Head	Percent of Sample	
Father	87	61
Mother	13	39
Total %	100	100
N:	(297)	(275)
	$X^2 = 137.22$	P <.001

* One respondent in each socio-economic status group did not respond to the question.

Table 13. Relatives seen once a week by socio-economic status.*

Relatives Seen Once a Week	Socio-economic Status High	Low
	Percent of Sample	
None	23	30
1 to 3	54	53
4 to 6	13	13
More than 6	10	4
Total %	100	100
N:	(203)	(183)
	$X^2=7.29$	P <.10

* There were 188 respondents who reported no relatives living nearby.

Table 14. Relatives living nearby by socio-economic status.*

Number of Relatives Nearby	Socio-economic Status High	Low
	Percent of Sample	
None	32	34
Several	48	53
Many	20	13
Total %	100	100
N:	(298)	(276)
	$X^2=6:17$	P <.05

* Since different families view distance in terms of their own ability to get to relatives for a visit, respondents reported the number of relatives living nearby on a subjective basis rather than indicating a specific number of relatives within a designated number of miles.

nomic status category tend to visit relatives more than immobile lower socio-economic families. A slight tendency in this direction is seen in the data in Table 13, but little real substantiation for Litwak's finding is apparent. In fact, Table 14 indicates that higher status respondents are more likely to have many relatives living nearby, perhaps accounting for the greater number of visits to relatives.

Table 16 indicates that lower status families are more likely to report a number of close friends among their neighbors. This finding appears to show that lower status families, while somewhat less likely to visit many relatives each week, are more likely to have close and friendly ties with their neighbors than are higher status families. The lower status respondents do not, however, report more visits with neighbors than the higher status families (see Table 15).

Table 15. Visits with neighbors by socio-economic status.

iVsits With Neighbors	Socio-economic Status High	Low
	Percent of Sample	
Never	1	1
Less than once a week	32	36
Once a week	21	17
Several times a week	23	22
Almost daily	23	24
Total %	100	100
N:	(298)	(276)
	$X^2=2.13$	P=NS

Table 16. Number of close friends among neighbors by socio-economic status.*

Number of Close Friends Among Neighbors	Socio-economic Status High	Low
	Percent of Sample	
None	27	18
Few	45	19
Some	16	37
Many	12	26
Total %	100	100
N:	(298)	(275)*
	$X^2=10.29$	P <.02

* One respondent in the low status group did not reply to the question.

Socio-economic Status and the Initiation of Medical Care

The decision to initiate medical care, like any other decision in a person's life, is influenced by what the decision-maker perceives around him and what previous actions have been successful in similar situations. The preceding section established that differences in the characteristics of the upper and lower socio-economic groups do exist, (e.g., education, occupation, age of family head, and percentage of female family heads). There are also some similarities to be found, (e.g., social integration patterns). What, then, is the difference in the way the two groups act when faced with a symptom of illness?

The dependent variable, initiation of professional medical care, is measured by an index composed of

reported symptoms and actions taken in response to those symptoms. Respondents were reporting in each case for the family as a whole. Therefore, the index is a measure of the family's initial response to illness, and not merely that of the respondent.

The index was constructed by dividing the total number of reported symptoms into the number of times a doctor was consulted for treatment. A dichotomous index of "high" and "low" initiation was constructed from the resulting percentages. A number of respondents reported no symptoms in the interview. These families (34 cases) were indexed as "high" or "low" initiators by using the responses to three other questions as factors indicating a tendency to initiate medical care:. These factors were: (1) reported actions in response to cold symptoms, (2) frequency of physical and dental checkups, and (3) having a regular family doctor. A cumulative scale was produced from these three factors. The scale, in turn, was dichotomized, allowing for the placement of the 34 cases in the initiation of medical care index. It was assumed in this procedure that some pattern would be exhibited in these other medical decision areas that would indicate decision tendencies for initiation of care in response to symptoms. By this procedure, 362 (63%) respondents fell into the high initiation group, and 212 (37%) into the low initiation group.

1. There is a positive relationship between the decision to initiate professional medical care and the socio-economic status of the individual or family involved in the decision.

The data presented in Table 17 show that the first principal hypothesis is supported. Families in the lower socio-economic status group are less likely to visit the doctor when they experience symptoms of illness than are families in the higher socio-economic status group. Seventy-one percent of the higher socio-economic status families tend to initiate care when a symptom occurs, while only 55 percent of the lower status families visit the doctor in similar circumstances. The X^2 value for the relationship indicates that the probability of no difference is less than .001.

Table 17. Initiation of professional medical care by socio-economic status.

Initiation of Professional Medical Care	Socio-economic Status	
	High	Low
	Percent of Sample	
High	71	55
Low	29	45
Total %	100	100
N:	(298)	(276)
	$X^2 = 15.85$	$P < .001$

Socio-economic Status and General Health Practices

The previous section points up a basic fact about low socio-economic status families: they are less likely to initiate a visit to the doctor when experiencing symptoms than are higher status families. This fact, coupled with the general picture of poor health and unsatisfactory health practices discovered in prior research, indicates that lower status families are less likely to care for their health in an adequate manner. The data from the three-county survey presented in this section are intended to emphasize several kinds of health practices in which the lower status families in Montana are deficient as compared to higher socio-economic status families.

Six indicators of health practices are selected from the data: (1) maintaining a relationship with a family doctor, (2) the value attached to physical checkups, (3) the average number of physical checkups by family members, (4) the average number of dental checkups by family members, (5) the use of home remedies for symptoms of illness, and (6) avoidance of treatment for symptoms of illness.

Having a Regular Family Doctor. A somewhat smaller percentage of families in the lower socio-economic status group report having a regular family doctor (see Table 18). The difference is small (82 percent in the lower status group versus 87 percent in the higher status group) and not significant, as indicated by the X^2 value. The fact that 82 percent of the lower status families report having a family doctor presents an interesting comparison with Koos' work in New York where only 36 percent of the Class III's reported a regular family doctor. The percentage in the higher status group reporting having a family doctor compares quite closely to the Class I's and Class II's of "Regionville" (29). There are several possible explanations for the lack of difference between the two groups. First, it is considerably more common for a family to have medical care today (Koos' work was done in the late Forties). The mass media have made medical science, the doctor, and medicine in general more familiar to the average family, including the lower socio-economic status family. Second, the lower status families in this sample are very stable geographically. They have had considerable time in the area to visit a doctor for emergencies, if not for regular care. These respondents may name a doctor that they have visited in-

Table 18. Having a regular family doctor by socio-economic status.*

Do You Have a Regular Family Doctor?	Socio-economic Status High Percent of Sample	Low
Yes	87	82
No	13	18
Total %	100	100
N:	(298)	(276)
	$X^2 = 2.64$	P <NS

* Tables 18 throug 23 give the data for all respondents unless otherwise noted.

Table 19. "Physical checkups are a waste of time and money" by socio-economic status.*

"Physical Checkups Are a Waste of Time and Money."	Socio-economic Status High Percent of Sample	Low
Yes	14	21
No	86	79
Total %	100	100
N:	(294)	(275)
	$X^2 = 5.97$	P <.02

* Five respondents did not reply to the question.

frequently over a long time as the "family doctor." Various kinds of welfare programs have also made the doctor more available to some lower socio-economic status groups. Last, the respondents may have falsely indicated having a family doctor. Economic considerations did not allow for checking each answer with a call to the physician named as the family doctor. With the increasing emphasis on regular medical care, many respondents may have been unwilling to admit having no regular physician.

The Value Attached to Physical Checkups. Each respondent was asked to agree or disagree with the statement "Physical checkups are a waste of time and money" (see Table 19). On the whole, both higher and lower socio-economic status families feel that physical checkups are of value, with 79 percent of the lower status and 86 percent of the higher status families disagreeing with the statement. However, the percentages do indicate that lower status families attach less value to physical checkups. The X^2 value for this difference is significant beyond the .02 level of probability.

Table 20. Reported physical checkup by socio-economic status.

Physical Checkups Per Year	Socio-economic Status High Percent of Sample	Low
Never	33	47
Less than once a year	18	14
Once a year	18	27
Twice a year	31	12
Total %	100	100
N:	(298)	(276)
	$X^2 = 27.34$	P <.001

Physical Checkups by Family Members. An average value for the time between physical checkups for all family members was used as an indicator of the average length of time between physical checkups for each responding family. These values were obtained from three questions on the interview schedule asking the number of physical checkups each member of the family had undergone in the last two years. They were then divided into four categories of physical checkups per year: twice a year, once a year, less than once a year, and never. This index was compared to socio-economic status. The results are presented in Table 20. The data indicate that members of lower socio-economic status families are significantly less likely to have physical checkups as often as members of high status families. While 47 percent of the lower status families never have physical checkups, only one-third of the higher status families have never seen the doctor for this kind of preventive care. The X^2 for the relationship exceeds the .001 level of significance.

Dental checkups by Family Members. An average value for the time between dental checkups for all family members was prepared in the same manner as the previous one dealing with physical checkups, using the answers to the questions regarding the frequency of dental checkups. Since there were not enough cases for analysis in the "less than once a year" category (2 cases), this category was not used in the scale. The results of comparing the dental checkups index to socio-economic status are presented in Table 21. Again, those from lower socio-economic status families are much less likely to have dental checkups each year. It is also much more likely that they have never seen a dentist for preventive care. In fact, while 64 percent of the lower socio-economic status families never have

Table 21. Reported dental checkups by socio-economic status.

Dental Checkups Per Year	Socio-economic Status High (Percent of Sample)	Low
Never	37	64
Once a year	40	25
Twice a year	23	11
Total %	100	100
N:	(298)	(276)
	$X^2=44.21$	$P<.001$

Table 22. Use of home remedies for symptoms of illness by socio-economic status.

Use of Home Remedies For Symptoms	Socio-economic Status High (Percent of Sample)	Low
Yes	14	30
No	86	70
Total %	100	100
N:	(298)	(276)
	$X^2=19.43$	$P<.001$

dental checkups, only 37 percent of the higher status group have never had preventive dental care, about one-half the percentage in the lower status group. The X^2 for this relationship exceeds the .001 level of significance.

Use of Home Remedies For Symptoms of Illness. As explained in section II, all respondents were asked to indicate whether a family member had experienced any of twenty-seven symptoms of illness in the last year. They were also asked to indicate the disposition of the symptoms. Visiting the doctor, the use of a home remedy, calling a quasi-practitioner such as a chiropractor, and no treatment were the possible courses of action. The two socio-economic groups are compared with respect to the reported use of a home remedy in Table 22.

Low socio-economic status families are more likely to treat a symptom with a home remedy than are families in the higher socio-economic status group. In the lower status group, 30 percent of the families report using home remedies, while only 14 percent of the higher status group use them. This relationship has a X^2 value of 19.43, significant beyond the .001 level.

Table 23. No treatment for symptoms of illness by socio-economic status.

No Treatment For Symptoms	Socio-economic Status High (Percent of Sample)	Low
Yes	42	63
No	58	37
Total %	100	100
N:	(298)	(276)
	$X^2=32.62$	$P<.001$

No treatment For Symptoms of Illness. Table 23 compares the higher and lower socio-economic groups with respect to treatment for symptoms of illness. Low socio-economic status families are again far more likely to neglect treatment for symptoms than higher status families. While 63 percent of the lower status families report no treatment for one or more symptoms, only 42 percent of the higher status families neglect treatment. The X^2 test for independence has a probability exceeding the .001 level of significance for this relationship.

Summary

The lower socio-economic status families differ markedly from the higher socio-economic status families in terms of a number of demographic variables. Lower status family heads, for example, are considerably older on the average than are higher status family heads. They are also more likely to be women. The above differences were anticipated from previous studies of low socio-economic status groups.

But there were some findings that were not predictable from the previous research, perhaps the result of conducting the study in the sparsely populated, largely rural state of Montana. For example, while the higher status families are more likely to own land, over one-half of the lower status families are also landowners. The lower status group seems to be as well integrated into the community as the higher status group. The picture is reasonably clear; even though low socio-economic status families in the sample are disadvantaged when compared to the higher status families in a number of areas, they are stable well-integrated parts of the community structure.

The hypothesis that there is a positive relationship between socio-economic status and the ini-

tation of professional medical care is supported by the data from this research. The lower status families are much less likely to visit a doctor when some family member has a symptom of illness.

Families from the lower socio-economic status group are less likely to care for their health needs in what the upper status group would consider an adequate manner. While they report having a regular family doctor only slightly less often than the higher status families, they are much less likely to seek out the doctor when they are sick. They tend to view physical checkups as a waste of time and money more often than the higher status families, and they are much less likely to have regular medical and dental checkups each year. The lower status families receive no treatment or use a home remedy significantly more often than those in the higher status group. For the measures of health practices selected from this data, at least, the lower status families seem to seek out and get less medical care when they are sick, and they are not as likely to get good preventive care when they are well as the higher socio-economic status families.

The next three sections are designed to shed further light on the factors that differ in the subculture of the lower status family and the subculture of the more privileged family, and the relationship of these factors to the initiation of professional medical care.

IV. THE ABILITY TO PAY AND THE INITIATION OF PROFESSIONAL MEDICAL CARE

Medicare, a program intended to provide prepaid medical care as a part of the social security system, is benchmark legislation in an effort by all levels of government to provide the necessary funds to pay for medical care. The ability to pay for medical care is no longer so restricted to the higher socio-economic classes. An increased ability to pay may come to the worker as part of his "package" of fringe benefits; it may be a part of veterans' privileges; it may come as a right to Indian groups; it may come as the result of increasing age or disability; it may be a benefit to a disadvantaged family in a lower income group. But in each case this payment of medical bills is ultimately due to a change in the overall value system—more and more people in our society view medical care as a right of every man and not the privilege of the monied few. The Somers (59) suggest that, while low income groups are less likely to qualify for health insurance, there is an increasing number of low income families who receive health insurance through employee benefit plans. Such plans do, in effect, increase income by increasing the ability of a family to pay for medical care. Providing the ability to pay for good medical care to groups that had never previously possessed it should also bring changes in the way that these people use medical services. This discussion presents data to test the hypothesis that ability to pay for medical care relates to increased readiness to initiate medical care.

The ability to pay is measured by the reported possession of health insurance, including Medicare. Since a part of the data was gathered before the initiation of the Medicare program, only 30 respondents report having this kind of insurance. Other families, no doubt, have since come under its provisions. This information cannot be reported, however. Although there are many differences between Blue Cross and private insurance plans, the two types of insurance are grouped together in this analysis. The distribution of health insurance for the entire sample is presented in Table 24. The type of insurance carried by the responding families is shown in Table 25. Reasons given for not carrying health insurance are presented in Table 26. As further supporting evidence, reported income level is also compared to initiation of medical care.

Table 24. Distribution of health insurance among respondents.*

Possess Health Insurance	Percent of Sample
Yes	68
No	32
Total %	100
N:	(389)

* Two respondents did not answer the question.

Table 25. Types of health insurance possessed by respondents.

Types of Health Insurance	Percent of Sample
1. Private company	46
2. Group insurance from place of work	24
3. Blue Cross or Blue Shield	15
4. Government plan other than Medicare	7
5. Medicare	7
6. County patient	1
Total %	100
N:	(389)

Table 26. Reasons given by respondents for not having health insurance.

Reasons for Not Having Health Insurance	Percent of Sample
1. Too expensive	36
2. Don't use it enough to make it pay	8
3. Don't believe in it	40
4. Don't know anything about it	2
5. It never pays off when you need it	3
6. It doesn't pay all of the bills anyway	1
7. Just cancelled it	2
8. Other	8
Total %	100
N:	(274)

Table 27. Initiation of professional medical care by possession of health insurance and socio-economic status.*

(a) Initiation of Professional Medical Care	Possession of Health Insurance: Yes, High SES	Yes, Low SES	No, High SES	No, Low SES
High	69%	62%	78%	46%
Low	31%	38%	22%	54%
N:	(242)	(149)	(55)	(127)

(b) Initiation of Professional Medical Care	Possession of Health Insurance: Yes	No
High	63%	55%
Low	37%	45%
N:	(391)	(182)

(c) Socio-economic Status	Possession of Health Insurance: Yes	No
High High (297)	81%	19%
Low (276)	54%	46%

(d) Source	X^2	d.f.	P
Total	60.06	3	<.001
AC	6.45	1	<.02
BC	49.90	1	<.001
ABC	3.72	1	<.10

A = Initiation of Professional Medical Care
B = Socio-economic Status (SES)
C = Possession of Health Insurance

* One respondent did not answer the question.

2a. Ability to pay: The individual or family that has health insurance tends to initiate professional medical care more readily than those that do not have health insurance.

Health Insurance and Initiation of Medical Care. Table 27 indicates that a positive relationship does exist between possession of health insurance and the initiation of professional medical care. The significance of the ABC interaction ($P<.10$) indicates that the socio-economic status of the respondents has some effect on the relationship of having health insurance to initiation of medical care. Tables 28 and 29 present the simple effects of the AC relationship at each level of socio-economic status.

As Table 28 shows, families in the higher socio-economic status group that do not have health insurance tend to initiate medical care as readily as those who do. No statistical differences in the data appear in the table.

Among the lower status families, a different situation is apparent. In Table 29 the percentages are in the predicted direction. Families that possess health insurance are indeed more likely to seek medical care upon the appearance of symptoms of illness than are families that do not have such insurance. The X^2 for this difference is significant at the .01 level of probability.

The hypothesis that having health insurance will lead to a greater tendency to initiate medical care is supported by the data for the lower socio-economic status families, but is not supported by the data for the higher status families. Apparently, an increased ability to pay—in this case possessing health insurance—is the needed impetus to get larger numbers of lower status families to initiate a visit to the doctor in the case of illness. Higher socio-economic status families, on the other hand, have more money

Table 28. Initiation of professional medical care by possession of health insurance—simple effects for high socio-economic status group.

Initiation of Professional Medical Care	Possession of Health Insurance: Yes, Percent of Sample	No, Percent of Sample
High	69	78
Low	31	22
Total %	100	100
N:	(242)	(55)
	$X^2 = 1.73$	P=NS

Table 29. Initiation of professional medical care by possession of health insurance—simple effects for low socio-economic status group.

	Possession of Health Insurance	
	Yes	No
Initiation of Professional Medical Care	Percent of Sample	
High	62	46
Low	38	54
Total %	100	100
N:	(149)	(127)
	$X^2 = 7.13$	$P < .01$

to spend for medical services outside of the insurance benefits.

Reported Income and Initiation of Medical Care. There is little difference in the way the various income groups initiate professional medical care except for the lowest income group. As Table 30 shows, over two-thirds of the families in each income level but the lowest were high initiators. In the lowest income group—below $3500—only about one-half of the families were high initiators. The X^2 for this relationship between income and initiation of medical care is significant at the .01 level.

While the data presented in Table 30 seem to support the hypothesis in the case of the lowest income families, they also modify the picture. There is apparently some income level below which the financial problems associated with getting medical care, even in the face of serious symptoms, become too great for the family to handle successfully. But when the family income gets over this level, $3500 or more for this sample, the family seeks the medical care it needs. Since the level of initiation of medical care is about the same for all of the families that make over $3500, it appears that initiation in these families is as much a function of the value system as it is a function of ability to pay for medical care. That is, those families in the $3500 to $5000 income group have relatively less ability to pay than families in the higher income groups, but they are willing to see the doctor just as often. This finding presents an interesting contrast with Anderson's (2) conclusions that medical and dental care increase consistently with income. As he points out, however, the disparity between income levels in terms of doctor and dentist visits has been decreasing over the last two or three decades. The data presented here seem to indicate that in the geographic area covered by this sample there is very little difference in initiation of medical care for financial reasons among all but the lowest income families.

Summary

The hypothesis proposing a positive relationship between the ability to pay as measured by the possession of health insurance and initiation of professional medical care is supported by the data, but only with some modifications. The general hypothesis seems to be tenable for the lower status group in this sample, but does not hold true for the higher status families.

The family in the higher socio-economic status group tends to initiate medical care at about the same rate whether it has health insurance or not. These families are more likely to have health insurance, but not having it does not deter them from going to the doctor when a symptom of illness appears.

The family in the lower socio-economic status

Table 30. Initiation of professional medical care by reported income level.*

	Reported Income Levels					
	Over 10,000	7,000 to 9,999	6,000 to 6,999	5,000 to 5,999	3,500 to 4,999	Under 3,500
Initiation of Professional Medical Care	Sample					
High	67	69	70	73	68	52
Low	33	31	30	27	32	48
Total %	100	100	100	100	100	100
N:	(39)	(77)	(61)	(74)	(98)	(221)
				$X^2 = 19.50$	$P < .01$	

* Since reported income was used in indexing the socio-economic status variable, socio-economic status is not controlled in this table.

group, on the other hand, is more likely to visit the doctor if it has the ability to pay for the service with health insurance. This may be due in part to the sample inability to stretch a limited income to include expensive doctor bills and, in part, to previous responses to illness. In either case having health insurance seems to remove some obstacle to the initiation of medical care in lower status families that either does not exist in more affluent families or is not of sufficient strength to prevent initiation of medical care when illness occurs.

V. PERCEPTION OF ILLNESS AND THE INITIATION OF PROFESSIONAL MEDICAL CARE

The perception of illness is a function of the environment and the individual's response to the milieu, physical and social, in which he lives. A definition of illness and consequent actions are responses to previous learning experiences, as well as the situation that exists in the present. This being the case, certain environmental factors should be good predictors of the way in which families perceive illness and react to it by visiting a doctor or dentist. The relationship of several of these factors to the initiation of professional medical care, the dependent variable, was hypothesized in section I. The factors were the amount of health information possessed by the family, the age of the head of family, the rural or urban nature of the place of residence, and the sex of the head of family.

Health Information. Families in which the major decision-makers possess a greater fund of health information are also likely to be families where symptoms are defined as indicators of illness. As the literature review suggests, greater health information is measured, first, by an index divided into three parts corresponding to high, average, and low degrees of health information possessed. This index was then cross-tabulated with the dependent variable as a test of the hypothesis.

Families that have a member with a serious illness are much more likely to have contacts with professional medical personnel, as well as a greater knowledge about illness (2). Each respondent was asked to indicate whether there was any family member that had experienced a serious illness. The results were compared to initiation of medical care as a second test of the health information hypothesis.

Most families today get many kinds of information from the mass media, including health information. Many television stations, for example, run public service announcements with information on symptoms that are indicators of serious diseases such as heart disease and cancer. Advertisements in newspapers, magazines, and on television often contain items of health information. The family that makes greater use of the mass media, then, may possess greater health information than the family that does not. A mass media index was prepared from the respondents' replies to questions regarding the amount of time devoted to watching television, listening to radio, and reading magazines and newspapers. This index was divided into four levels of use of mass media and related to initiation of professional medical care as a final test of the hypothesis.

> 2b. Health information: The individual or family that possesses greater health information tends to initiate professional medical care more readily than those that lack such information.

Table 31 shows the health information index run against initiation of medical care. Part (a) of the table indicates that families with more information about matters of health are more likely to be high initiators in response to symptoms of illness. The percentages presented in part (b) of Table 31 are in the direction predicted by the hypothesis, with a significant relationship ($P<.01$) between high health information and high initiation of professional medical care. Three-quarters of the families that have "high" health information are high initiators. This percentage drops to 62 percent at the "average" health information level and 56 percent for the "low" information group.

Serious Illness of a Family Member. In this sample the presence of a seriously ill family member apparently has no effect on the initiation of medical care. Part (d) of Table 32 indicates that no significant relationship is present between the two variables. The percentages, in fact, are slightly in the opposite direction, as shown in part (b) of the table. As shown in part (a) of the table, there is virtually no difference in the percentage of high and low initiators within each level of the socio-economic status variable when separated by the presence of a seriously ill family member.

Many of the respondents indicated serious illness in the family, but named an illness that might not be considered as serious in other families. Since this might have an effect on the relationship of serious illness to initiation of medical care, the nature of the illness was controlled by limiting serious illness to cardiac problems, stroke, cancer, serious diabetic problems (requiring repeated medication), and polio. This left 122 families that reported serious illness of a family member. This reduced sample was compared to the dependent variable to see if controlling for the nature of the serious illness changed

Table 31. Initiation of professional medical care by the health information index and socio-economic status.

(a)

Initiation of Professional Medical Care	Health Information Index: High		Average		Low	
	High SES	Low SES	High SES	Low SES	High SES	Low SES
High	79%	66%	67%	57%	66%	48%
Low	21%	34%	33%	43%	34%	52%
N:	(106)	(55)	(96)	(93)	(96)	(128)

(b)

Initiation of Professional Medical Care	Health Information Index: High	Average	Low
High	75%	62%	56%
Low	25%	38%	44%
N:	(161)	(189)	(224)

(c)

Socio-economic Status	Health Information Index: High	Average	Low
High (298)	36%	32%	32%
Low (276)	20%	34%	46%

(d)

Source	X^2	d.f.	P
Total	30.84	6	<.001
AC	14.27	2	<.01
BC	19.96	2	<.001
ABC	—	2	NS

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C=Health Information Scale

the results found in Table 32. The data are presented in Table 33.

Families that report having a member with one of the five serious illnesses listed above are not more likely to initiate medical care than are families that have no seriously ill member. Controlling for the nature of the illness does not alter the findings previously reported for all families that indicated having a seriously ill member. As part (b) of Table 33 shows, the percentages are not significantly different, and, in fact, are slightly opposed to the direction predicted by the hypothesis.

Mass Media Use and Initiation of Medical Care. Table 34 presents the mass media use scale compared to the dependent variable, initiation of professional medical care. The significance of the AC Chi square ($P<.05$) indicates that families that make greater use of the mass media are more likely to initiate medical care. As part (a) of the table shows, over two-thirds of the families in the two highest categories of mass media use are high initiators. In the lower two categories, the percentages drop to 61 percent and 53 percent, respectively.

2c. Age: Families headed by older persons are less likely to initiate professional medical care than those headed by younger persons.

There is an increasingly heavy value placed on good health care. Professional medical services are becoming available to nearly every family as the impact of third-party payment and prepaid medical plans becomes more noticeable. This does not mean, however, that all families are prepared to take advantage of new innovations in medical care and health practices. One such family may be the older family—a family headed by a person whose value system stems from an earlier time. The major decision-maker in such a family may base a decision to

Table 32. Initiation of professional medical care by serious illness of a family member and socio-economic status.

(a) Initiation of Professional Medical Care	Has a Family Member Had a Serious Illness? Yes High SES	Yes Low SES	No High SES	No Low SES
High	71%	54%	71%	55%
Low	29%	46%	29%	45%
N:	(126)	(140)	(172)	(136)

(b) Initiation of Professional Medical Care	Has a Family Member Had a Serious Illness? Yes	No
High	62%	64%
Low	38%	36%
N:	(266)	(308)

(c) Socio-economic Status	Has a Family Member Had a Serious Illness? Yes	No
High (298)	42%	58%
Low (276)	51%	49%

(d) Source	X^2	d.f.	P
Total	4.13	3	NS
AC	.23	1	NS
BC	4.11	1	<.05
ABC	—	1	—

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C=Has a Family Member Had a Serious Illness?

Table 33. Initiation of professional medical care by respondents reporting a family member with cardiac problems, stroke, cancer, diabetes, and polio and socio-economic status.

(a) Initiation of Professional Medical Care	Serious Illness—Restricted to Cardiac Problems, Stroke, Cancer, Diabetes, and Polio. Yes High SES	Yes Low SES	No High SES	No Low SES
High	70%	53%	71%	55%
Low	30%	47%	29%	45%
N:	(60)	(62)	(172)	(136)

(b) Initiation of Professional Medical Care	Serious Illness—Restricted to Cardiac Problems, Stroke, Cancer, Diabetes, and Polio. Yes	No
High	61%	64%
Low	39%	36%
N:	(122)	(308)

(c) Socio-economic Status	Serious Illness—Restricted to Cardiac Problems, Stroke, Cancer, Diabetes, and Polio. Yes	No
High (232)	26%	74%
Low (198)	31%	69%

(d) Source	X^2	d.f.	P
Total	2.31	3	NS
AC	1.38	1	NS
BC	.11	1	NS
ABC	.82	1	NS

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C=Serious Illness—Restricted . . .

initiate medical care on information and values not altogether appropriate to the medical situation today. Older families generally have fewer young children at home, and, as a consequence, may have less occasion to visit a medical practitioner, leading to a greater likelihood that a more serious symptom may not result in a visit to the doctor. Older persons are less likely to have substantial formal educations; they are also less likely to seek professional help for all sorts of problems (10). These factors suggest the older families are less likely to visit the doctor in the face of illness than are younger families.

The inverse relationship between age and the head of family and initiation of professional medical care is established in Table 35. The percentages in part (b) of the table are in the direction predicted by the hypothesis, with the number of high initiation families decreasing progressively as age of the head of family increases. For example, 76 percent of the families with heads under 40 initiate medical care readily, while the percentage of high initiation families drops to 61 percent for families with heads between 40 and 60, and drops again to 54 percent for families with heads over 60 years old.

There is little difference in initiation behavior between younger families from the two socio-economic status groups. As part (a) of the table shows, about three-quarters of the families with heads under 40 are high initiators, regardless of the social class of the family. Apparently younger persons in the lower status group are more willing to make the necessary financial sacrifice to obtain medical care than are older lower status persons. While the percentage of high initiators in the higher socio-economic status group drops off somewhat in the two

Table 34. Initiation of professional medical care by mass media inputs and socio-economic status.*

(a) Initiation of Professional Medical Care	Mass Media Inputs Scale 1(High)		2		3		4(Low)	
	High SES	Low SES	High SES	Low SES	High SES	Low SES	High SES	Low SES
High	76%	52%	75%	61%	62%	60%	66%	48%
Low	24%	48%	25%	39%	38%	40%	34%	52%
N:	(93)	(65)	(88)	(51)	(76)	(73)	(41)	(86)

(b) Initiation of Professional Medical Care	Mass Media Inputs Scale 1(High)	2	3	4(Low)
High	67%	70%	61%	53%
Low	33%	30%	39%	47%
N:	(158)	(139)	(149)	(127)

(c) Socio-economic Status	Mass Media Inputs Scale 1(High)	2	3	4(Low)
High (298)	31%	30%	25%	14%
Low (275)	24%	18%	27%	31%

(d) Source	X^2	d.f.	P
Total	39.64	9	<.001
AC	8.66	3	<.05
BC	29.94	3	<.001
ABC	1.04	3	NS

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C=Mass Media Inputs Scale

* One respondent could not be classified on the Mass Media Inputs

older age categories, over two-thirds of these families are still high initiators. Older lower status families, on the other hand, are much less likely to initiate medical care. According to the earlier finding that such families are more likely to report a seriously ill family member, it appears that their families have the greatest need in terms of medical care, but are least likely to seek it.

Part (b) of Table 35 illustrates the clear connection between the two variables; families with younger heads are more likely to visit the doctor or dentist when faced with symptoms of illness. The X^2 for the AC interaction presented in part (d) of the table exceeds the .001 level of significance.

2d. Place of residence: Families that live in more urban areas of residence are more likely to initiate professional medical care.

Families that live in largely rural areas are highly individualistic groups. They are forced by relative isolation to perform man tasks for themselves that might be done by others in the more interdependent urban setting. They pride themselves on the ability to "do for themselves" in most situations. The Mountain Region, primarily a rural area, has many such families. In fact, this region may well be the last stronghold in the United States of the Gemeinschaft and the "extraordinarily individualistic" family (32). To the degree that rural families do for themselves when faced with symptoms of illness, they may be less likely to seek out medical and dental care than urban families that are more used to depending on others for solutions to many problems.

The three counties surveyed in this research are quite different in terms of their rural and urban nature. As previously mentioned, Ravalli County is primarily rural; its largest town has a population of about 2500. Fergus County is more urban, with Lewistown, the county seat, having a population of 7500. Cascade County, with Great Falls and its 65,000 population as the center, is the most urban of

Table 35. Initiation of professional medical care by age of head of family and socio-economic status.

(a) Initiation of Professional Medical Care	Age of Head of Family: Under 40 High SES	Under 40 Low SES	40 to 60 High SES	40 to 60 Low SES	Over 60 High SES	Over 60 Low SES
High	77%	73%	67%	52%	69%	50%
Low	23%	27%	33%	48%	31%	50%
N:	(109)	(157)	(32)	(48)	(108)	(120)

(b) Initiation of Professional Medical Care	Age of Head of Family: Under 40	40 to 60	Over 60
Low	76%	61%	54%
High	24%	39%	46%
N:	(157)	(265)	(152)

(c) Socio-economic Status	Age of Head of Family: Under 40	40 to 60	Over 60
High (293)	37%	53%	10%
Low (276)	17%	39%	44%

(d) Source	X^2	d.f.	P
Total	93.26	6	<.001
AC	16.96	2	<.001
BC	82.99	2	<.001
ABC	—	2	NS

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C=Age of Head of Family.

the three counties. Dividing the sample into three sections by county and relating the results to initiation of medical care provides a test of the hypothesis that urban families are more likely to initiate professional medical care.

The data presented in Table 36 support the hypothesis. As part (b) of the table shows, families that live in the more urban counties are more likely to be high initiators. Ravalli County, with almost its entire population classified as rural, is least likely to have high initiation families. Fergus County has a greater percentage of high initiation families and Cascade County has the highest percentage of the three. Part (d) of Table 36 indicates that the difference in the percentages for the three counties is significant, with the X^2 value for the AC interaction exceeding the .01 level.

An investigation of part (a) of Table 36 shows that the greatest differences in initiation behavior are to be found in the lower socio-economic status group. In rural Ravalli County only 36 percent of the lower status families were high initiators. This compares to 57 percent in Fergus County and 66 percent in Cascade County. While the same tendency toward higher initiation in more urban counties is noticeable among the higher status families, the difference in percentages is not great. The data indicate that low status rural families are the least likely to initiate medical care for symptoms of illness.

Summary

The family that displays greater knowledge about matters pertaining to health is more likely to initiate professional medical care. Of the three measures of health information, only the presence of a seriously ill family member is not positively related to initiation of care. When the nature of the serious illness is restricted to cardiac problems, stroke, cancer, serious diabetes, and polio, there still is no statistically significant relationship between serious illness of a family member and the dependent variable. A possible explanation for this lack of relationship between having a seriously ill family member and initiation lies in the way in which the depen-

Table 36. Initiation of professional medical care by the rural-urban nature of the county and socio-economic status.

(a) Initiation of Professional Medical Care	Rural-Urban Nature of the County					
	Ravalli County (High Rural)		Fergus County (Average)		Cascade County (High Urban)	
	High SES	Low SES	High SES	Low SES	High SES	Low SES
High	66%	36%	69%	57%	73%	66%
Low	34%	64%	31%	43%	27%	34%
N:	(77)	(110)	(101)	(90)	(120)	(76)

(b) Initiation of Professional Medical Care	Rural-Urban Nature of the County		
	Ravalli County (High Rural)	Fergus County (Average)	Cascade County (High Urban)
High (298)	54%	63%	73%
Low (276)	46%	37%	28%
N:	(187)	(191)	(196)

(c) Socio-economic Status	Rural-Urban Nature of the County		
	Ravalli County (High Rural)	Fergus County (Average)	Cascade County (High Urban)
High	26%	34%	40%
Low	40%	33%	27%

(d) Source	X^2	d.f.	P
AC	21.18	6	<.001
BC	10.13	2	<.01
ABC	12.42	2	<.01
	—	2	NS

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C=Rural-Urban Nature of the County

dent variable was indexed. A family with the seriously ill member may report many symptoms, most of them relating to the seriously ill member. Since the nature of the illness is already well defined for the family and they know how to handle the symptoms which are constantly present, the doctor is not consulted for each symptom. This may cause enough of these families to be classed as low initiators to destroy any relationship that may exist. The weight of evidence, however, is in support of the hypothesis.

When a family is headed by an older person, it is less likely to initiate medical care in response to symptoms than the family headed by a younger person. Families headed by older persons in all likelihood have generally older members. Such families' medical problems are likely to be chronic and well-defined, and quite possibly do not bring about visits to the doctor. Younger families, on the other hand, frequently have children at home that need medical care for a variety of acute symptoms. Younger heads of families are likely to have more education and probably place a greater value on using the doctor's expertise. Families with older heads are more likely to be in the lower socio-economic status group.

The three counties surveyed in this research are quite different in terms of their rural-urban characteristics. Ravalli County is almost completely rural, Fergus County is somewhat more urban, and Cascade County is considerably more urban than the other two. When the families were divided into groups by county and the results used as a measure of the rural or urban nature of the families, it was found that families from more rural areas are less likely to initiate professional medical care than families from more urban areas, even with socio-economic status controlled.

VI. WILLINGNESS TO ENTER THE TREATMENT CYCLE AND THE INITIATION OF PROFESSIONAL MEDICAL CARE

Attitudes and values already established in the personality of a decision-maker have an effect on the nature of the decision he is likely to make. In the case of the decision to initiate a visit to the doctor or dentist, there are a number of attitudes and values that may influence the decision when a symptom of illness occurs in the family. Hypotheses relating attitudes and values to the initiation of professional medical care were stated in Chapter I. These included: (1) the attitude of the family toward doctors, (2) the attitude of the family toward work, (3) the educational values held by the family, (4) a parochial view toward change, and (5) the degree of powerlessness felt by the family in terms of bringing about change through their own efforts. This chapter presents the data relating measures of these attitudes and values to initiation of professional medical care, the dependent variable.

The respondents in the survey were asked to agree or disagree to a number of statements about doctors. A Guttman scale of negative attitudes toward doctors was constructed from five of the items, producing a six point scale. This scale was collapsed to a three part scale by grouping scale types one and two, three and four, and five and six together. For convenience these three groups are called "high negative," "average," and "high positive" in terms of their attitudes toward doctors. This scale plus the responses to two single items were compared to initiation of medical care as a test of the hypothesis that a favorable attitude toward doctors would lead to a decision to initiate medical care when some family member has a serious symptom.

> 2c. Attitudes toward doctors: The individual or family with favorable attitudes toward doctors tends to initiate professional medical care more readily than those that do not have favorable attitudes toward doctors.

Part (d) of Table 37 shows that families with a negative attitude toward doctors are more likely to be low initiators. The percentage of low initiators, shown in part (b) of the table, decreases significantly as the attitude toward doctors becomes more positive. Among the families classed as highly negative, 44 percent were low initiators compared to 34 percent and 31 percent low initiators in the average and highly positive toward doctors families. This difference in the percentages is statistically significant ($P<.05$). The ABC interaction term, however, approaches significance ($P<.10$), indicating that socio-economic status has some effect on the relationship between the attitude toward doctors and the initiation of profescsional medical care. To clarify the nature of the relationship, tests for the simple effects of the attitude toward doctors on initiation of medical care at both levels of socio-economic status are necessary. These tests are presented in Tables 38 and 39.

As table 38 indicates, in the higher status group there is no relationship between the attitude held toward doctors and the initiation of medical care. Apparently, families in the higher socio-economic status group go to the doctor about as often when they dislike the doctor as when they like him.

Table 39 presents the attitudes toward doctors scale compared to initiation of medical care for the lower socio-economic status group only. The lower status families act quite differently from the higher status families in terms of their attitudes toward the doctor and initiation of care. They are, for example, less likely to initiate medical care when they feel negatively about the doctor. The percentages of high initiators among lower status families increase progressively from 45 percent in the highly negative group to 61 percent in the average group and to 63 percent in the highly positive group. These differences, as indicated by the X^2 value, are significant at the .05 level.

A visit to the doctor can be expensive action. To test whether they felt that doctors attempt to "gouge" their patients, the respondents were asked to agree or disagree with two items: "Doctors ask you to come back for examinations when you really don't need to," and "Doctors don't really care how much it's going to cost when they give you a prescription." Affirmative answers to these statements show a negative attitude toward the doctor, his high fees for service, and his honesty in dealing with his patients.

Responses to the statement, "Doctors ask you to come back for examinations when you really don't need to," compared to the dependent variable are presented in Table 40. The significant X^2 value for the AC interaction, shown in part (d) of the table, indicates that those who disagree with the question are more likely to be high initiators. The percentages presented in part (b) are in the direction predicted by the hypothesis, with 55 percent of those who agree to the question being high initiators and 65 percent of those who disagree being high initiators. The Chi square value for the AC interaction is 4.17, exceeding the .05 level of probability.

As the percentages shown in part (a) of the table indicate, higher socio-economic status families

Table 37. Initiation of professional medical care by the attitude toward doctors scale and socio-economic status.

(a) Initiation of Professional Medical Care	Attitude Toward Doctors Scale: High Negative		Average		High Positive	
	High SES	Low SES	High SES	Low SES	High SES	Low SES
High	71%	45%	70%	61%	73%	63%
Low	29%	55%	30%	39%	27%	37%
N:	(86)	(115)	(138)	(118)	(74)	(43)

(b) Initiation of Professional Medical Care	Attitude Toward Doctors Scale: High Negative	Average	High Positive
High	56%	66%	69%
Low	44%	34%	31%
N:	(201)	(256)	(117)

(c) Socio-economic Status	Attitude Toward Doctors Scale: High Negative	Average	High Positive
High (298)	29%	46%	25%
Low (276)	42%	43%	15%

(d) Source	X^2	d.f.	p
Total	24.11	6	<.001
AC	6.67	2	<.05
BC	12.42	2	<.01
ABC	5.02	2	<.10

A = Initiation of Professional Medical Care
B = Socio-economic Status (SES)
C = Negative Attitude Toward Doctors Scale

initiate at about the same level whether or not they think the doctor asks for unneeded visits. The lower socio-economic status group, however, shows a considerably lower rate of initiation if they feel the doctor is asking for such visits. Among these families, only 41 percent of those who answered affirmatively to the item were high initiators, while 58 percent of those who disagreed were in this category. Apparently, higher status families may grumble about the cost of unnecessary visits but go to the doctor at about the same rate, nevertheless. In the lower status group a feeling that the doctor is "gouging" them results in a drop in the rate of initiation for symptoms of illness.

A fairly substantial portion of the respondents seem to feel that the doctor has little concern for their financial problems; forty-four percent of the respondents agreed that "Doctors don't really care how much it's going to cost when they give you a prescription." Table 41 shows how the responses to this item relate to initiation of care and socio-economic status.

A = Initiation of Professional Medical Care
B = Socio-economic Status (SES)
C = "Doctors Ask You to Come Back . . ."

Part (d) of the table indicates that respondents who agree to the question are less likely to be high initiators than those who disagree. Part (b) of Table 41 shows that 58 percent of those who agree are high initiators, while 67 percent of those who disagree are in the high initiation group. The percentages, then, are in the direction predicted by the hypothesis with the AC interaction significant at the .02 level of probability.

2f. Attitudes toward work: The individual or family that has positive attitudes toward work tends to initiate professional medical care less readily than those that do not have such attitudes.

Dynes et **al.** (10) suggest that historically Americans have viewed work as fundamental to the well being of man and leisure as a sinful waste of time. The contemporary conception, they claim, has changed somewhat, with work still the central value

Table 38. Initiation of professional medical care by the attitude toward doctors scale—simple effects for high socio-economic status group.

Initiation of Professional Medical Care	Attitude Toward Doctors Scale: High Negative	Average Percent of Sample	High Positive
High	71	70	73
Low	29	30	27
Total %	100	100	100
N:	(86)	(138)	(74)
		$X^2 = .40$	P=NS

Table 39. Initiation of professional medical care by the attitude toward doctors scale—simple effects for low socio-economic status group.

Initiation of Professional Medical Care	Attitude Toward Doctors Scale: High Negative	Average Percent of Sample	High Positive
High	45	61	63
Low	55	39	37
Total %	100	100	100
N:	(115)	(118)	(43)
		$X^2 = 8.76$	P <.05

and leisure as a restorative for work. If work is an important value, any activity, including time taken to visit the doctor and time taken to follow the doctor's orders, may be viewed with disfavor in terms of interference with normal work activities.

The respondents in the three-county survey were asked to agree or disagree with a number of statements regarding work and attitudes toward work. Five of these items were used to construct a Guttman scale on the dimension of positive or negative value placed on work. This scale, as well as three single items, was compared to initiation of professional medical care as a test of the hypothesis. The data are presented in Tables 42 to 47.

While there is no significant AC interaction in part (d) of Table 42, the ABC interaction approaches significance at the .10 level. This suggests that the relationship between positive attitudes toward work as measured by the Guttman scale and the initiation of medical care is affected by socio-ecenomic status. To clarify the relationship, the simple effects of the

Table 40. Initiation of professional medical care by "doctors ask you to come back when you really don't need to" and socio-economic status.*

(a)

Initiation of Professional Medical Care	"Doctors Ask You to Come Back . . .": Agree High SES	Agree Low SES	Disagree High SES	Disagree Low SES
High	72%	41%	71%	58%
Low	28%	59%	29%	42%
N:	(43)	(58)	(252)	(217)

(b)

Initiation of Professional Medical Care	"Doctors Ask You to Come Back . . .": Agree	Disagree
High	55%	65%
Low	45%	35%
N:	(101)	(469)

(c)

Socio-economic Status	"Doctors Ask You to Come Back . . .": Agree	Disagree
High (295)	15%	85%
Low (275)	21%	79%

(d)

Source	X^2	d.f.	P
Total	10.36	3	<.02
AC	4.17	1	<.05
BC	4.14	1	<.05
ABC	2.05	1	NS

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C="Doctors Ask You to Come Back . . ."

* Two respondents did not reply to the item.

positive attitude toward work scale on initiation are tested in Tables 43 and 44.

Table 43 presents the data relating the positive attitudes toward work scale to initiation of medical care for the higher socio-economic status group only. Although the percentages are slightly opposed to the direction predicted by the hypothesis, they are not statistically significant.

In the lower socio-economic status group, there is no significant relationship between a positive attitude toward work and the initiation of medical care. Table 44 shows that the percentage are not in the predicted direction.

Retirement often means the end of productive work, particularly for those who have not been prepared for a useful later life through education. It may mean decreased power in decision-making within the family, decreased ability to consume at estab-

Table 41. Initiation of professional medical care by "doctors don't really care how much it's going to cost when they give you a prescription" and socio-economic status.*

(a) Initiation of Professional Medical Care	"Doctors Don't Really Care How Much . . . Agree High SES	Agree Low SES	Disagree High SES	Disagree Low SES
High	69%	47%	72%	62%
Low	31%	53%	28%	38%
N:	(121)	(127)	(174)	(142)

(b) Initiation of Professional Medical Care	"Doctors Don't Really Care How Much . . Agree	Disagree
High	58%	67%
Low	42%	33%
N:	(248)	(316)

(c) Socio-economic Status	"Doctors Don't Really Care How Much . . Agree	Disagree
High (295)	41%	59%
Low (269)	47%	53%

(d) Source	X^2	d.f.	P
Total	8.97	3	<.05
AC	5.67	1	<.02
BC	2.19	1	NS
ABC	1.11	1	NS

A = Initiation of professional Medical Care
B = Socio-economic Status (SES)
C = "Doctors Don't Really Care How Much . . ."

* Ten respondents did not reply to the item.

lished levels, and, perhaps more important, an increasing sense of futility and uselessness for the once active person. It follows that the respondents' attitudes toward retirement also reflect their attitudes and values related to work. The respondents were asked to agree or disagree with the statement. "Quitting work and retiring is a sure way to shorten your life," as a measure of attitudes toward work.

The AC interaction shown in part (d) of Table 45 indicates that there is some tendency for those who disagree with the statement to be high initiators. However, the difference between those who agree and disagree in terms of high initiation of care, 59 percent as opposed to 67 percent, only approaches significance. The direction of the percentages in part (b) of the table is in the predicted direction, lending some support to the hypothesis. As indicated by part (a) of the table, higher status respondents were equally likely to be high initiators regardless of their answer to the item. The major difference lies in the lower status group. In this group those who disagreed with the item were more likely to be high initiators.

The respondents were asked to reply to the statement, "A man can be happy at any job if he sets his mind to it." A majority of respondents, 58 percent, agreed with the statement. This result, combined with the majority that agreed with the statement regarding work as "Godgiven," seems to indicate that work is an important value to families in the Mountain Region.

The data presented in part (b) of Table 46 support the hypothesis that a high value placed on work results in lower initiation of medical care. Those who agree that a man can be happy at any job are less likely to be high initiators than those who disagree. While 60 percent of the "agrees" are in the high initiation group, 68 percent of those who disagree are high initiators. The percentages, then, are in the expected direction. The X^2 value for the AC interaction shown in part (d) of the table is statistically significant, exceeding the .05 level of probability.

When cross-tabulated with the initiation of professional medical care, the various measures of attitudes toward work present a somewhat unclear picture of the relationships. The Guttman scale proves not to be significantly related to the dependent variable, and, while some indication of confounding is present, the simple effects for the relationship are also not significant. The two single items are related to initiation in the manner predicted by the hypotheses. Two possibilities for the conflicting nature of the data suggest themselves: (1) the measures of attitudes toward work are not measuring the same content, and (2) it is perhaps not clear what goals the modern person works toward. For example, if the individual places a high value on work, does he also value the help of the doctor who keeps him healthy for work? Another possibility is that one of the goals of hard work and the resulting upward mobility is an increased ability to live the "good life," including good medical care and good health. Whatever the cause, the data do not clearly confirm the hypothesis, but the weight of evidence indicates that some relationship between the factors does exist.

2g. Attitudes toward education: The individual or family that has favorable attitudes toward education tends to initiate professional medical care more readily than those that do not have a favorable attitude toward education.

Table 42. Initiation of professional medical care by the attitudes toward work scale and socio-economic status.

(a) Initiation of Professional Medical Care	Attitudes Toward Work Scale: High Positive — High SES	High Positive — Low SES	Average — High SES	Average — Low SES	High Negative — High SES	High Negative — Low SES
High	74%	52%	73%	57%	63%	50%
Low	26%	48%	27%	43%	37%	50%
N:	(85)	(97)	(142)	(155)	(71)	(24)

(b) Initiation of Professional Medical Care	Attitudes Toward Work Scale: High Positive	Average	High Negative
High	62%	65%	60%
Low	38%	35%	40%
N:	(182)	(297)	(95)

(c) Socio-economic Status	Attitudes Toward Work Scale: High Positive	Average	High Negative
High (298)	29%	48%	23%
Low (276)	35%	56%	9%

(d) Source	X^2	d.f.	P
Total	28.17	3	<.001
AC	.86	1	NS
BC	23.80	1	<.001
ABC	3.51	1	<.10

A=Initiation of Professional Care
B=Socio-economic Status (SES)
C=Positive Attitudes Toward Work Scale

Table 43. Initiation of professional medical care by the attitudes toward work scale—simple effects for the high socio-economic status group.

Initiation of Professional Medical Care	Attitudes Toward Work Scale: High Positive	Average	High Negative
High	74	72	63
Low	26	28	37
Total %	100	100	100
N:	(85)	(142)	(71)
		$X^2=2.34$	P=NS

Table 44. Initiation of professional medical care by the attitudes toward work scale—simple effects for the low socio-economic status group.

Initiation of Professional Medical Care	Attitudes Toward Work Scale: High Positive	Average	High Negative
High	52	57	50
Low	48	43	50
Total %	100	100	100
N:	(97)	(155)	(24)
		$X^2=.94$	P=NS

The person who has a good formal education has several advantages in approaching medical problems, including the decision to initiate professional medical care. Among others, these advantages include more general knowledge about health problems, a more positive outlook toward the modern scientific approach to health care, and, quite often, greater ability to pay for medical care. An indication of this situation is the highly positive relationship between socio-economic status and initiation of professional medical care already established in this research.

Table 47 shows that the educational level of the head of family is positively associated with the initiation of medical care. Those with lower levels of formal education are less likely to initiate a visit to the doctor in response to symptoms of illness. The magnitude of the relationship is indicated by the X^2 value, which exceeds the .02 level of probability.

While the educational level of the head of family compared to the dependent variable seems to point to a substantiation of the hypothesis, it is altogether possible that educational level and educational values are quite different phenomena. Therefore, the respondents in the survey were asked to reply to a number of statements regarding their attitudes toward education. From these items a Guttman scale of attitudes toward education was constructed. This scale, the number of adult education courses taken by the respondents, and the response to the statement, "You can still learn more by working at a job than by attending any university," are compared to the initiation of care to provide further tests ofthe hypothesis.

Although there are some obvious differences in the two status groups in their attitudes toward education, few differences appear when the scale of attitudes toward education is related to initiation of professional medical care. Part (b) of the table shows that those with a favorable attitude are somewhat more likely to be high initiators; the percentages are in the direction predicted by the hypothesis. The AC interaction, however, is not significant. The data in Table 48 give little support to the hypothesis.

The person who has a positive attitude toward education is more likely to try to obtain knowledge through various adult education programs that are available from university extension and continuing education programs. Table 49 shows how participa-

Table 45. Initiation of professional medical care by "quitting work and retiring is a sure way to shorten your life" and socio-economic status.*

(a) Initiation of Professional Medical Care	"QuittingWork and Retiring is a Sure . . ." Agree High SES	Agree Low SES	Disagree High SES	Disagree Low SES
High	71%	50%	71%	60%
Low	29%	50%	29%	40%
N:	(102)	(135)	(195)	(137)

(b) Initiation of Professional Medical Care	"QuittingWork and Retiring is a Sure . . ." Agree	Disagree
High	59%	67%
Low	41%	33%
N:	(237)	(332)

(c) Socio-economic Status	"QuittingWork and Retiring is a Sure . . ." Agree	Disagree
High (297)	34%	66%
Low (272)	50%	50%

(d) Source	X^2	d.f.	P
Total	16.21	3	<.01
AC	3.35	1	<.10
BC	13.65	1	<.001
ABC	—	1	NS

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C="Quitting Work and Retiring is a Sure . . ."

* Five respondents did not reply to the item.

Table 46. Initiation of professional medical care by "a man can be happy at any job if he sets his mind to it" and socio-economic status.*

(a) Initiation of Professional Medical Care	"A Man Can Be Happy At Any Job . . ." Agree High SES	Agree Low SES	Disagree High SES	Disagree Low SES
High	66%	54%	76%	56%
Low	34%	46%	24%	44%
N:	(153)	(180)	(143)	(95)

(b) Initiation of Professional Medical Care	"A Man Can Be Happy At Any Job . . ." Agree	Disagree
High	60%	68%
Low	40%	32%
N:	(333)	(238)

(c) Socio-economic Status	"A Man Can Be Happy At Any Job . . ." Agree	Disagree
High (296)	52%	48%
Low (275)	65%	35%

(d) Source	X^2	d.f.	P
Total	15.04	3	<.01
AC	4.41	1	<.05
BC	11.11	1	<.001
ABC	—	1	NS

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C="A Man Can Be Happy At Any Job . . ."

* Three respondents did not reply to the item.

Table 47. Initiation of professional medical care by educational level of the family head.*

	Educational Level of Head of Family				
	None or Grade School	Some High School	High School Grad.	Some College	College Grad. or More
High	56	67	69	57	79
Low	44	33	31	43	21
Total %	100	100	100	100	100
N:	(207)	(107)	(145)	(70)	(42)

$X^2 = 13.21$ $P < .02$

* Socio-economic status is not controlled in this table, since the index for socio-economic status includes the educational level of the head of family. Three respondents did not answer the question.

Table 48. Initiation of professional medical care by the attitudes toward education scale and socio-economic status.

(a) Initiation of Professional Medical Care	Positive		Educational Attitude Scale Average		Negative	
	High SES	Low SES	High SES	Low SES	High SES	Low SES
High	72%	56%	71%	51%	67%	56%
Low	28%	44%	29%	49%	33%	44%
N:	(158)	(117)	(79)	(65)	(61)	(94)

(b) Initiation of Professional Medical Care	Positive	Educational Attitude Scale Average	Negative
High	65%	62%	61%
Low	35%	38%	39%
N:	(275)	(144)	(155)

(c) Socio-economic Status	Positive	Educational Attitude Scale Average	Negative
High (298)	53%	27%	20%
Low (276)	42%	24%	34%

(d) Source	X^2	d.f.	P
Total	14.67	6	<.05
AC	.97	2	NS
BC	13.67	2	<.01
ABC	.01	2	NS

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C=Educational Attitudes Scale

tion in adult education classes relates to the initiation of medical care. Families of respondents who report having taken one or more adult education classes are more likely to visit the doctor in response to symptoms of illness. The direction of the percentages in part (b) of the table point up this relationship, giving support to the hypothesis. Over two-thirds of those who attended adult education classes are also high initiators, while 61 percent of those who reported no attendance at such classes are in the high initiation group. The hypothesis is supported by the data in the direction of the percentages, but not by the magnitude of the relationship, which, as indicated by the X^2 value for the AC interaction in part (d) of the table, is not significant.

Table 49. Initiation of professional medical care by adult education and socio-economic status.

(a) Initiation of Professional Medical Care	Agree High SES	Agree Low SES	Disagree High SES	Disagree Low SES
High	72%	58%	70%	53%
Low	28%	42%	30%	47%
N:	(145)	(71)	(152)	(204)

(b) Initiation of Professional Medical Care	Agree	Disagree
High	67%	61%
Low	33%	39%
N:	(216)	(356)

(c) Socio-economic Status	Agree	Disagree
High (297)	49%	51%
Low (275)	26%	74%

(d) Source	X^2	d.f.	P
Total	32.54	3	<.001
AC	2.41	1	NS
BC	32.15	1	<.001
ABC	—	1	NS

A = Initiation of Professional Medical Care
B = Socio-economic Status (SES)
C = Adult Education

Table 50. Initiation of professional medical care by "you can still learn more by working at a job than by attending any university" and socio-economic status.*

(a) Initiation of Professional Medical Care	"You Can Still Learn More . . ." Agree High SES	Agree Low SES	Disagree High SES	Disagree Low SES
High	69%	48%	71%	59%
Low	31%	52%	29%	41%
N:	(112)	(117)	(175)	(152)

(b) Initiation of Professional Medical Care	"You Can Still Learn More . . ." Agree	Disagree
High	58%	65%
Low	42%	35%
N:	(229)	(327)

(c) Socio-economic Status	"You Can Still Learn More . . ." Agree	Disagree
High (287)	39%	61%
Low (269)	43%	57%

(d) Source	X^2	d.f.	P
Total	4.37	3	NS
AC	2.85	1	<.10
BC	1.14	1	NS
ABC	.38	1	NS

A = Initiation of Professional Medical Care
B = Socio-economic Status (SES)
C = "You Can Still Learn More . . ."

* Eighteen respondents did not reply to the item.

University attendance is becoming a necessity in the modern urban society. It is perhaps less important in the rural areas of the Mountain Region where large centers are unknown and the problems of industrialization and over-population are, indeed, far away. Those who value education are aware of the need of a college education, however, even in the sparsely populated state of Montana. As a measure of attitudes toward education, the respondents were asked to agree or disagree with the statement, "You can still learn more by working at a job than by attending any university."

A majority of the respondents disagree with the statement; 327 (57 percent) feel that the best learning experience can be found in the university rather than on the job. Part (b) of Table 51 shows how the responses to the statement relate to the initiation of medical care. The percentages in the table are in the direction predicted by the hypothesis; 58 percent of those who agree with the item (i.e. do not value education) are high initiators, while 65 percent who disagree are in the high initiation group. Although the differences in the percentages only approach significance, as indicated by the X^2 value for the AC interaction in part (d), the trend of the data is in support of the hypothesis.

Part (c) of Table 50 indicates that the answers to the item are not related to socio-economic status. This is one of the few tables in the research that exhibits significance or near significance in one portion and shows no relationship between the independent variable and the control variable. Although the high status families show some tendency to disagree with the statement, the differences are not statistically significant.

While the number of years in school of the family head shows a relationship to initiation of medical care, the three measures of educational attitudes show only a tenuous relationship with initia-

Table 51. Initiation of professional medical care by parochialism and socio-economic status.

(a) Initiation of Professional Medical Care	Parochialism Scale: High		Average		Low	
	High SES	Low SES	High SES	Low SES	High SES	Low SES
High	78%	52%	69%	56%	68%	60%
Low	22%	48%	31%	44%	32%	40%
N:	(72)	127)	(145)	(125)	(81)	(24)

(b) Initiation of Professional Medical Care	Parochialism Scale: High	Average	Low
High	61%	63%	67%
Low	39%	37%	33%
N:	(199)	(270)	(105)

(c) Socio-economic Status	Parochialism Scale: High	Average	Low
High (298)	24%	49%	27%
Low (276)	46%	45%	9%

(d) Source	X^2	d.f.	P
Total	49.64	6	<.001
AC	.85	2	NS
BC	46.85	2	<.001
ABC	1.94	2	NS

A = Initiation of Professional Medical Care
B = Socio-economic Status (SES)
C = Parochialism Scale

tion. Although there is some tendency in the data to support the hypothesis that positive educational attitudes lead to high initiation of medical care, it is apparent that no definitive support is found in the preceding tables.

2h. Parochialism: The individual or family that maintains a parochial view toward change tends to initiate professional medical care less readily than those with a more cosmopolitan view.

Many Montanans take a dim view of the rapid changes they observe in the urban-dominated world. What was satisfactory in the "good old days" is satisfactory to them. Kraenzel (32) calls these persons "extraordinarily individualistic individuals." Change, including the medical advances of the last several years, is not necessarily good, and usually is something to be avoided. Suchman (63) documents that such a parochial view apparently affects the degree to which illness is reported. The present hypothesis is designed to test the effect of a parochial view on the initiation of professional medical care.

A number of agree-disagree items were included in the interview schedule that were designed to measure certain aspects of the parochial world view. Several of these items produced a Guttman scale of parochialism. This scale, as well as several single items, is compared to the dependent variable as an empirical test of the hypothesis.

If the hypothesis is supported by the data, families with high scale scores on the parochialism scale should tend to be lower initiators than families with low scale scores. Part (b) of Table 51 shows that the percentages are slightly in the direction predicted by the hypothesis. The differences, however, are not statistically significant.

Parochials are usually quite concerned when they are faced with impending changes in their environment. Many preventive health practices such as vaccination, pasteurization of milk, chlorination of water, and, in the last few years, fluoridation of water supplies have been opposed by those with parochial views (20). Since fluoridation of water is presently an issue in several places in Montana, the

Table 52: Initiation of professional medical care by "Fluoridation of water seems like a pretty dangerous thing to do" and socio-economic status.*

(a) Initiation of Professional Medical Care	"Fluoridation of Water Seems Like . . ." Agree High SES	Agree Low SES	Disagree High SES	Disagree Low SES
High	66%	47%	72%	58%
Low	34%	53%	28%	42%
N:	(35)	(79)	(245)	(170)

(b) Initiation of Professional Medical Care	"Fluoridation of Water Seems Like . . ." Agree	Disagree
High	53%	66%
Low	47%	34%
N:	(114)	(415)

(c) Socio-economic Status	"Fluoridation of Water Seems Like . . ." Agree	Disagree
High (280)	13%	87%
Low (249)	32%	68%

(d) Source	X^2	d.f.	P
Total	32.43	3	<.001
AC	6.89	1	<.01
BC	28.82	1	<.001
ABC	—	1	NS

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C="Fluoridation of Water SReems Like . . ."

* Forty-five respondents did not reply to the item.

respondents were asked to agree or disagree with the following statement as a measure of parochialism: "Fluoridation of water seems like a pretty dangerous thing to do."

Forty-five of the respondents indicate that they are undecided about the issue. (Fluoridation of water is not an issue in the counties surveyed, and may not have been well known to the respondents.) Of those who did reply, most disagree with the item. Part (b) of Table 52 shows the replies to the statement cross-tabulated with initiation of medical care. The respondents who indicate high parochialism by agreeing with the item are less likely to be high initiators than the families that disagree; 53 percent of the "agree" respondents are high initiators, while 66 percent of the "disagree" respondents are in the high initiation group. The AC interaction shown in part (d) of the table is statistically significant at the .01 level of probability.

Table 53. Initiation of professional medical care by "the trouble with going into business is that you're likely to lose whatever you've saved over the years" and socio-economic status*

(a) Initiation of Professional Medical Care	"The Trouble With Going Into Business . . ." Agree High SES	Agree Low SES	Disagree High SES	Disagree Low SES
High	79%	43%	68%	63%
Low	21%	57%	32%	37%
N:	(72)	(107)	(219)	(155)

(b) Initiation of Professional Medical Care	"The Trouble With Going Into Business . . ." Agree	Disagree
High	58%	66%
Low	42%	34%
N:	(179)	(374)

(c) Socio-economic Status	"The Trouble With Going Into Business . . ." Agree	Disagree
High (291)	25%	75%
Low (262)	41%	59%

(d) Source	X^2	d.f.	P
Total	29.90	3	.001
AC	3.53	1	.10
BC	16.32	1	.001
ABC	10.05	1	.01

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C="The Trouble With Going Into Business . . ."

* Twenty-one respondents did not reply to the item.

A hesitancy to undertake risks by going into new endeavors appears to be related to a parochial view. As a further measure of parochialism, the respondents were asked to reply to the statement, "The trouble with going into business is that you're very likely to lose whatever you've saved over the years." An agree answer indicates a more parochial view than a disagree reply. The responses to the item, compared to initiation of professional medical care provide a further test of the hypothesis.

Table 53 presents the data. As part (d) shows, the AC interaction only approaches significance. The significance of the ABC interaction term (P<.01) suggests, however, that the relationship between the answers to the item and initiation of medical care is a function of the socio-economic status variable. To clarify the relationship, the simple effects of the answers to the item on initiation of care are presented in Tables 54 and 55.

Table 54. Initiation of professional medical care by "the trouble with going into business is that you're very likely to lose whatever you've saved over the years"—simple effects for the high socio-economic status group.

Initiation of Professional Medical Care	"The Trouble With Going Into Business . . ." Agree	Disagree
	Percent of Sample	
High	79	68
Low	21	32
Total %	100	100
N:	(72)	(219)
	$X^2 = 3.21$	$P < .10$

Table 55. Initiation of professional medical care by "the trouble with going into business is that you're very likely to lose whatever you've saved over the years"—Simple effects for the low socio-economic status group.

Initiation of Professional Medical Care	"The Trouble With Going Into Business . . ." Agree	Disagree
	Percent of Sample	
High	43	63
Low	57	37
Total %	100	100
N:	(107)	(155)
	$X^2 = 9.17$	$P < .01$

Families in the higher status group that disagree with the statement (i.e., are low on parochialism) are somewhat less likely to initiate medical care. Table 54 indicates that 79 percent of the high status families that agreed to the item are high initiators, but only 68 percent of those who disagreed are high on initiation.

In the lower status group the percentages are decidedly in the direction predicted by the hypothesis; only 43 percent of the lower status families who agree to the question are high initiators, while 63 percent of those that disagree show the greater tendency to visit the doctor. This relationship, as indicated by the X^2 value for Table 55, is statistically significant ($P < .01$).

Apparently, a conservative tendency regarding new ventures shows a highly negative association with initiation of medical care in the lower status group, while the same attitude is not true of the higher status respondents. The data, then, are in general support of the hypothesis in the case of the lower status families, but do not support the proposition for the higher status group.

This finding suggests that going into business is viewed with alarm by the lower status families to a greater degree than in the higher status group. The significant BC interaction aiso indicates this possibility. It appears that this variable is a more appropriate measure of parochialism in lower status families. This conclusion seems reasonable in light of the significant relationships found between other measures of parochialism and initiation of medical care.

2i. Powerlessness: The individual or family that feels powerless tends to initiate professional medical care less readily than those that feel able to bring about change through their own efforts.

Cohen et al. (8) state that one of the most prominent themes found in the "Low Income Culture" is that of "Powerlessness, the unpredictable world, and fate." The extent to which feeling—unable to cause and predict outcomes—affects the initiation of medical care is not well documented in the literature. The feeling that the family is powerless to influence the medical well-being of family members that have symptoms of illness, defined here as powerlessness, may cause the family to put off visits to the doctor or dentist, even in the face of serious symptoms.

The data from the three-county survey are used here to test the proposition that an inverse relationship does exist between a feeling of powerlessness and the readiness to initiate professional medical care. In the survey a number of agree-disagree items were included that were designed to measure the extent to which the respondents felt able to control the outcomes of situations. Five of these items were used to construct a Guttman scale of powerlessness or medical apathy. This scale, along with three single items, is related to initiation of medical care as tests of the hypothesis.

Table 56 shows the Guttman scale of powerlessness compared to initiation of professional care. (The six point scale is collapsed into three categories of "high," "average," and "low" degrees of powerlessness.) As predicted by the hypothesis, the percentages indicate that the family which rates "high" on the powerlessness scale is less likely to be a high initiator of medical care. As part (a) of table 56

Table 56: Initiation of professional medical care by the powerlessness scale and socio-economic status.

(a) Initiation of Professional Medical Care	Powerlessness Scale: High		Average		Low	
	High SES	Low SES	High SES	Low SES	High SES	Low SES
High	64%	50%	72%	52%	73%	64%
Low	36%	50%	28%	48%	27%	36%
N:	(55)	(78)	(142)	(121)	(101)	(77)

(b) Initiation of Professional Medical Care	Powerlessness Scale: High	Average	Low
High	56%	63%	69%
Low	44%	37%	31%
N:	(133)	(263)	(178)

(c) Socio-economic Status	Powerlessness Scale: High	Average	Low
High (298)	18%	48%	34%
Low (276)	28%	44%	28%

(d) Source	X^2	d.f.	P
Total	12.95	6	<.05
AC	5.95	2	<.02
BC	8.05	2	<.01
ABC	—	2	NS

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C=Powerlessness Scale

shows, percentages of high initiators become progressively greater as powerlessness decreases; 56 percent of the "high" powerless group, 63 percent of the "average" group, and 69 percent of the "low" powerless families are high initiators. The AC interaction in part (d) of the table indicates that these differences are significant beyond the .02 level of probability, thus supporting the hypothesis.

A perusal of part (a) of Table 56 shows that while initiation increases with decreased powerlessness in both of the socio-economic groups the differences are particularly noticeable in the lower status families. In this group a 14 percent difference exists between the high and low powerless categories in the number of high initiators. It appears that families in both socio-economic groups are affected by feelings of powerlessness in the way they initiate medical care, but that the lower status families are particularly susceptible to this influence. This finding is important in view of the greater numbers of families expressing powerlessness in the lower status group. The BC interaction presented in part (d) of the table indicates this.

The responding families were asked to agree or disagree with the statement, "Poor people seem to get poorer and have less as time goes on." These responses are compared to patterns of initiation in Table 57 as a test of the hypothesis.

The table shows the results of cross-tabulating the answers to the statement with the dependent variable. Part (d) of the table indicates that, while there is a significant relationship between the answers to the item and initiation of medical care, the X^2 for the ABC interaction term is highly significant ($P<.001$). This suggests that the way the families responded to the statement differs as a function of the control variable, socio-economic status. The simple effects of the answers to the item on initiation of care are shown in Tables 58 and 59.

The families that disagree with the statement are more likely to be high initiators for both of the socio-economic status levels. The percentage differences in the higher status group are even more pronounced in the predicted direction than was apparent in Table 57, with 92 percent of those who disagree as compared to only 46 percent of those

Table 57. Initiation of professional medical care by "poor people seem to get poorer and have less as time goes on" and socio-economic status.*

(a) Initiation of Professional Medical Care	"Poor People Seem to Get Poorer . . ." Agree High SES	Agree Low SES	Disagree High SES	Disagree Low SES
High	46%	47%	92%	64%
Low	54%	53%	8%	36%
N:	(136)	(144)	(156)	(126)

(b) Initiation of Professional Medical Care	"Poor People Seem to Get Poorer . . ." Agree	Disagree
High	46%	80%
Low	54%	20%
N:	(280)	(282)

(c) Socio-economic Status	"Poor People Seem to Get Poorer . . ." Agree	Disagree
High (292)	47%	53%
Low (270)	53%	47%

(d) Source	X^2	d.f.	P
Total	85.18	3	<.001
AC	67.20	1	<.001
BC	2.56	1	NS
ABC	15.42	1	<.001

A = Initiation of Professional Medical Care
B = Socio-economic Status (SES)
C = "Poor People Seem to Get Poorer . . ."

* Twelve respondents did not reply to the item.

Table 58. Initiation of professional medical care by "poor people seem to get poorer and have less as time goes on"—simple effects for the high socio-economic status group.

Initiation of Professional Medical Care	"Poor People Seem to Get Poorer . . ." Agree	Disagree
	Percent of Sample	
High	46	92
Low	54	8
Total %	100	100
N:	(136)	(156)
	$X^2 = 72.58$	P<.001

Table 59. Initiation of professional medical care by "poor people seem to get poorer and have less as time goes on"—simple effects for the low socio-economic status group.

Initiation of Professional Medical Care	"Poor People Seem to Get Poorer . . ." Agree	Disagree
	Percent of Sample	
High	47	64
Low	53	36
Total %	100	100
N:	(144)	(126)
	$X^2 = 10.15$	P<.01

that agree being high initiators. The relationship is not quite as pronounced in the lower status group, shown in Table 59, but it is still highly significant. The X^2 value for the table, however, is greater than the .01 level. There is apparently a sound relationship between an attitude of optimism concerning the status of the poor in our society as measured by this item and the willingness to initiate medical care, particularly among the families in the higher socio-economic group. This relationship supports the hypothesis that those who do not feel powerless will be more likely to initiate medical care when a symptom of illness occurs.

As a further measure of powerlessness, the respondents replied to the statement, "We are the sort of people who believe that the average individual doesn't have much to say about what will happen to him." An agree response indicates a greater feeling of inability to determine outcomes by individual or family effort than a disagree reply. The answers to the statement tabulated with initiation of medical care are presented in Table 60.

The data in part (b) of the table indicate that the families who believe that they have little power over outcomes are less likely to initiate medical care. The differences in the percentages are in the predicted direction; 59 percent of those who agree and 66 percent of those who disagree are high initiators. The AC interaction in part (d) of the table only approaches significance at the .10 level, however.

To measure powerlessness as it relates specifically to health problems, the respondents were asked to agree or disagree with the statement, "People really can't do much about their health; it's either

Table 60. Initiation of professional medical care by "we are the sort of people who believe that the average person doesn't have much to say about what will happen to him" and socio-economic status.*

(a) Initiation of Professional Medical Care	"We Are . . . Believe That the Average . . ." Agree High SES	Agree Low SES	Disagree High SES	Disagree Low SES
High	65%	56%	74%	52%
Low	35%	44%	26%	48%
N:	(102)	(162)	(194	(110)

(b) Initiation of Professional Medical Care	"We Are . . . Believe That the Average . . ." Agree	Disagree
High	59%	66%
Low	41%	34%
N:	(264)	(304)

(c) Socio-economic Status	"We Are . . . Believe That the Average . . ." Agree	Disagree
High (296)	34%	66%
Low (272)	60%	40%

(d) Source	X^2	d.f.	P
Total	38.63	3	<.001
AC	2.71	1	<.10
BS	35.90	1	<.001
ABC	.02	1	NS

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C="We Are . . . Believe That the Average . . ."

* Six respondents did not reply to the item.

Table 61. Initiation of professional medical care by "people really can't do much about their health; it's either good or bad no matter what they do" and socio-economic status.*

(a) Initiation of Professional Medical Care	"People Can't Really Do Much About . . ." Agree High SES	Agree Low SES	Disagree High SES	Disagree Low SES
High	71%	45%	71%	57%
Low	29%	55%	29%	43%
N:	(21)	(51)	(274)	(225)

(b)	"People Can't Really Do Much About . . ." Agree	Disagree
High	53%	65%
Low	47%	35%
N:	(72)	(499)

(c) Socio-economic Status	"People Can't Really Do Much About . . ." Agree	Disagree
High (295)	7%	93%
Low (276)	18%	87%

(d) Source	X^2	d.f.	P
Total	19.89	3	.001
AC	3.73	1	.10
BC	16.70	1	.001
ABC	—	1	NS

A=Initiation of Professional Medical Care
B=Socio-economic Status (SES)
C="People Can't Really Do Much About . . ."

* Three respondents did not reply to the item.

good or bad no matter what they do." If the hypothesis in this section is supported by the data, those who show a powerless attitude by agreeing to the item should be willing to initiate medical care.

Table 61 presents the responses to the item compared to initiation of professional medical care. The direction of the percentages, shown in part (b) of the table, is in support of the hypothesis, with 53 percent of the respondents who agree with the item in the high initiation group, and 65 percent of those who disagree also in that category. But the magnitude of the AC interaction only approaches significance.

Summary

When a family feels negative toward the doctor, it is less likely to seek his services if a family member has a symptom of illness. Three measures of attitudes toward doctors were related to initiation of professional medical care as a test of the hypothesis that predicted the relationship expressed above. The Guttman scale measuring attitudes toward doctors is significantly related to the dependent variable for the lower socio-economic status families but not for the higher status families. The two single items which measured the respondent's assessment of the doctor's fairness in his dealings with patients are related to initiation of care. The families that view the doctor as a fair-dealer are more likely to visit him in the case of illness.

The hypothesis that a high value toward work will result in lower initiation of medical care is not clearly substantiated, but some evidence is presented that supports the hypothesis. The Guttman scale of attitudes toward work is not significantly related

to the dependent variable. Since the ABC interaction approached significance, the simple effects for the scale on initiation of care at both levels of the socio-economic status variable were tested. Again, there is no significant relationship between the two variables. The two single items used as measures of attitudes toward work are related to initiation of medical care in the manner predicted by the hypothesis. Those who look with suspicion on retirement are more likely to be low initiators. The families that indicate a favorable attitude toward work by agreeing that a man can be happy at any job are also less likely to visit the doctor for illness.

Although there is a significant relationship between the educational level of the head of family and initiation of medical care — an expected relationship in view of the indexing procedure for socio-economic status and the fact that socio-economic status itself was related to initiation of medical care —there is little support for the hypothesis that high educational values are related to high initiation of medical care. The Guttman scale of education values is not significantly related to initiation, and the other two measures, while the percentages favor the hypothesis, only approach significance in their relationship to the dependent variable.

The family that has a parochial view of change is less likely to visit the doctor or dentist in the face of symptoms of illness. This is particularly true of the parochial lower socio-economic status families. The two single items used as measures of parochialism are related to initiation of medical care at a statistically significant level or approaching significance. The third measure, the Guttman scale of parochialism, does not significantly relate to initiation of medical care, but the percentages are in the predicted direction. The weight of evidence seems to support the proposition that a tendency to a parochial view is related to a lower tendency to initiate professional medical care. An interesting finding is that higher socio-economic status persons who agree that going into business is dangerous financially are somewhat more likely to be high initiators. Apparently, parochialism is related to lower initiation, but with some modification for the higher status families.

Families that feel unable to change the course of events through their own efforts are less likely to initiate medical care than the families that feel able to manipulate their environment. The four measures of powerlessness used in this chapter are either significantly related to the dependent variable or the relationship approaches significance.

The Guttman scale of powerlessness is related to initiation, the question expressing pessimism about the situation of poor people is very highly related to initiation, and the other two items regarding the inability of people to do anything about health and the inability of the average person to do anything about his situation both approach significance in their relationship to initiation of care. The data presented in this section seem to give good support to the hypothesis that a feeling of powerlessness leads to lower initiation of professional medical care.

VII. SUMMARY AND CONCLUSIONS

The primary purpose of this research was to determine for a sample of Montana families if a positive relationship existed between the family's socio-economic status and its medical initiation behavior, and then, controlling for socio-economic status, to determine if a relationship existed between initiation of professional medical care and a number of variables that perhaps affect the decision to visit the doctor or dentist. In the latter endeavor, a model suggested by McNerney and his colleagues was used to organize the analysis of several factors that may influence the decision to initiate medical care. The hypothesis predicting a relationship between socio-economic status and initiation of medical care, and the other hypothesis proposing a relationship between a number of other variables and initiation, with socio-economic status controlled, were examined in sections III through VI.

The purpose of this section is to summarize the findings of the study within the framework of the analytical model. Conclusions regarding the nature of the findings are presented and analyzed.

Socio-economic Status and the Initiation of Professional Medical Care

The predicted relationship between socio-economic status and initiation of professional medical care is confirmed by the findings in this research. Montana families that are part of the lower socio-economic status group are much less likely to seek out the doctor or dentist when a serious symptom of illness occurs. This finding confirms the results from a number of studies mentioned in the review of literature, and suggests that one of the reasons for the poor health of low status individuals lies in the inability or unwillingness to see the doctor, even when a serious symptom of illness is involved. Since initiation of medical care was indexed in relation to the presence of serious symptoms of illness in this research, the above finding underscores the serious nature of the lack of adequate medical care among the poor in Montana. Not only do lower status families get less preventive medical care, but they get substantially less medical care for really serious

symptoms. This gives concrete support to the contention that a basic reason for the ill health of the poor can be attributed directly to the lack of good medical care.

Lower socio-economic status families in this sample are different from the higher status families in a number of ways. For example, the family head in a lower status family probably has a poorer education, holds a less desirable job, is not as skilled, and is probably older than his counterpart in the higher socio-economic status family. More lower status families are headed by the mother. The poor in this Montana sample are good examples of "stable poverty." Over one-half of the families own land, over three-quarters have lived in the same county for over ten years, and most seem to be well integrated into their neighborhood and community. The lower status family does, however, make a great deal less use of the medical services that are used consistently by more advantaged families. Such families are much less likely to obtain preventive medical care than the higher status families. They also indicate that they place little value on such practices in comparison to higher status families.

Lower socio-economic status families like these found in the sparsely populated state of Montana are hard to identify and difficult to reach medically. If they do not come to the attention of public assistance agencies or schools, it is highly unlikely that they will be reached with programs intended to improve their medical situation. One director of a Headstart program in Montana remarked ruefully that all he had managed to accomplish during a summer was to take care of chronic and congenital medical and dental problems. Such problems have not come to the attention of public or private agencies that deal with health problems because the families involved—and their medical problems—are lagely hidden from public view. These problems might be more likely to turn up in a city ghetto where the general problem is known, and constant, if not always successful, effort is being expended to identify and solve them.

The Ability to Pay and the Initiation of Professional Medical Care

An increased ability to pay for medical care is related to an increased likelihood of initiating professional medical care, but the pattern is not consistent for both socio-economic levels. Reported income used as a measure of ability to pay is significantly related to initiation of medical care. The findings show, however, that most of the difference lies in the group of families reporting less than a $3500 per year income. In all of the other income levels, the rate of initiation of care is about equal. The findings for the possession of health insurance and initiation are quite similar. The lower socio-economic status families who have health insurance are considerably more likely to seek care for symptoms than the lower status families that do not have insurance. In the higher socio-economic status families, the possession of health insurance does not substantially alter the pattern of initiation of medical care. Actually, the percentages indicate that a somewhat greater, though not significant, number of higher status families without insurance tend to initiate care for symptoms than is true for higher status families with insurance.

The fact that lower socio-economic status families are more likely to visit the doctor when they have health insurance seems to bode well for programs that provide lower income families with government or industry sponsored insurance. In terms of seeking care for illness, such programs would appear to be more effective for families from the lower status groups—families from the more privileged groups will go to the doctor for illness whether or not they have insurance to pay for it. For families in Montana, there seems to be little difference in initiation of care in any of the economic groups except the lowest. The conclusion can be drawn that providing greater ability to pay for families with lower incomes,—but not low enough to be classed as "poverty level"—is not likely to increase the frequency of visits to the doctor when illness occurs, although it may make other areas of their life more comfortable by freeing limited income for other purposes.

As expected, the lower socio-economic status families are much less likely to have health insurance. It is obvious from the foregoing discussion that the families with the least need for insurance, and who tend to make the least use of it, are the families that are most likely to have it. In Montana, as elsewhere, health insurance is carried by middle class and upper class families with steady jobs and good incomes. Those families with positive attitudes toward health care, families that get more preventive medical care, and families that are younger and healthier have insurance.

Perception of Illness and the Initiation of Professional Medical Care

Three factors from the environment within which the decision is made to initiate medical care were considered in section V. These included: (1) amount of health information possessed by the family, (2) the age of the head of family and (3) the rural or urban nature of the place of residence.

Amount of Health Information. Being informed about matters of health is positively associated with

initiation of professional medical care. The families that have more health information seek out the doctor when a family member has a symptom of illness. This finding confirms the hypothesis and suggests that the way the family perceives illness does relate to the amount they know about illness, symptoms, and other medical matters. Greater knowledge leads to a greater likelihood that a symptom will mean illness to the family involved, and will result in a visit to the doctor or dentist.

Of the three measures used to test the relationship between health information and initiation, only one, the presence of a seriously ill family member, does not conform to the direction predicted by the hypothesis. Actual health information (measured by a Guttman scale) and use of the mass media (measured by a summated scale) are both related to initiation of medical care. This suggests two conclusions:

1. The presence of a seriously ill family member probably prevents some families from being classified as high initiators in this study. This happens because serious illness carries with it a constellation of symptoms, many of them included on the symptoms list in the interview schedule. All of these symptoms do not result in a visit to the doctor in such families—the family is aware of the illness and its symptoms, and is prepared to deal with it by medication on hand or by treatment previously outlined by the physician. It is also possible that in these cases the doctor is consulted by telephone when symptoms occur; information regarding the frequency of this type of doctor-patient interaction was not obtained in the survey.

2. Greater information placed in the hands of families with low initiation rates should lead to greater initiation of medical care and better health for these families. The problem lies in getting the necessary information to them. As indicated in the data, lower status families—who are also the most likely to be low initiators—are less likely to attend adult education classes, make less use of the mass media, and are generally less likely to be reached with programs designed to give them information about health matters. The director of the Montana Extension Service points out, for example, that it is possible to reach about 30 percent of the population with existing extension and continuing education programs, and, further, that any hope of reaching the lower status families with information lies in individual contact. Such an approach is, of course, very expensive and few sparsely populated states are willing or able to initiate the necessary programs.

Age of the Head of Family. Families headed by older persons visit the doctor less in response to symptoms than the families headed by younger persons, confirming the hypothesis that an inverse relationship exists between the two variables. Families with older heads are less likely to have children at home, and the mean age of family members is probably higher. Both of these factors indicate that families headed by older persons are less likely to suffer from acute symptoms, which often occasion an immediate trip to the doctor, and more likely to have symptoms of chronic illnesses, which are often well understood by the individuals involved and are not so likely to bring about a doctor visit. Older persons are also more likely to make decisions on the basis of values held much earlier in life. In the case of medical care, this may mean putting off seeing the doctor as long as possible, meaning as long as the ill person can keep going at all.

Since older families are a substantial part of the stable lower socio-economic status families found in Montana, they constitute a hard core of poor health and poor medical care that is highly resistant to attempts to change the situation. These persons live on limited, fixed incomes, they are less likely to be reached with health information than younger lower status families, and they have fixed and conservative attitudes that are very difficult to change.

The Rural or Urban Nature of the Place of Residence. Regardless of socio-economic status, families that live in the more rural counties are less likely to get to the doctor for illness. This finding confirms the hypothesis predicting greater initiation among families living in more urban areas.

Part of the explanation for this finding lies in the general nature of the region. Most services are located in the several more populated cities, with a minimum of services, including medical services, in the rural counties. For example, the number of physicians in Ravalli and Fergus counties is about one-tenth the number in Cascade County, although the population of Cascade County is only about five times larger than the other two. The physician-patient ratio reflects this difference; there are about 1400 patients per physician in the two more rural counties and only 700 patients per physician in Cascade County (61). Further, there are no specialists practicing in either Fergus or Ravalli Counties, while the Great Falls medical directory lists 18 different specialities available in Cascade County. The dentist-patient ratio in the more urban county is also much more favorable, although not at as high a rate. The potential patient in the more rural areas, then, does not have as many physicians immediately available to him, and he must travel to a large center to see a specialist. It is not surprising that somewhat fewer families see the doctor for symptoms under the circumstances.

Willingness to Enter the Treatment Cycle and the Initiation of Professional Medical Care

Five attitudinal variables were related to initiation of professional medical care in section VI. These were: (1) attitude toward doctors, (2) attitude toward work, (3) educational values, (4) parochialism, and (5) powerlessness.

Attitude Toward Doctors. The family that has a positive attitude toward the doctor visits him more often when it has a member with some symptom of illness. This is particularly true of low socio-economic status families. The hypothesis that a positive attitude toward the doctor leads to a higher rate of initiation of medical care is generally supported by the findings, but with the modification that the relationship is particularly significant for the lower status group.

The decision-maker in a family has some attitude toward the doctor. Usually this attitude is a function of previous associations with the doctor, some successful and some not successful. This attitude is one of the factors that is taken into account in the decision to visit the physician when illness strikes the family. In the lower status family this attitude is much more likely to be negative. Two explanations for this situation seem plausible. First, the lower status family gets little preventive medical care. They visit the dentist from toothache to toothache and the doctor when they can no longer carry out daily tasks. This may often result in a less-than-successful treatment, and gives the family a bad impression of the doctor's ability to help when illness occurs. Second, the doctor is a highly paid professional. The lower status family finds it hard to understand the doctor; the doctor, too, has little knowledge of the poverty subculture. As a result, the doctor simply gives orders about medications and treatment regimens without explanation, expecting to be obeyed without question. This condescension does not go unnoticed. Neither does the high fee for service charged by the doctor. It is difficult for the person on a small income to understand why the doctor gets as much for an hour's work as he does for a week or even two week's efforts.

The higher socio-economic status family may have a poor attitude toward the doctor, but it has less effect on its decision to visit the doctor. A long established habit of turning matters of illness over to the doctor, plus a more accurate ability to define symptoms as illness tend to overcome a negative attitude toward the physician in the higher status family, although the data indicate that it does make some difference in the way such a family initiates medical care.

The findings above suggest than an improvement in the attitude toward the doctor will result in a greater likelihood that the family experiencing a symptom of illness will get to the doctor or dentist. An effort to improve the doctor's "image" would be particularly effective for increasing initiation in the lower socio-economic status group. Combining such a program with an effort to give families greater information about medical problems might be particularly effective.

Attitudes Toward Work. The hypothesis that a positive attitude toward work will result in a lower rate of initiation of professional medical care is not firmly substantiated by the data in this research. The picture, however, is unclear, with some of the data in support of the contention, and some tending to support the hypothesis at a non-significant level. It is interesting that the lower status families are much more likely to have a positive attitude toward work. This finding may, of course, be due to the manner in which the questions regarding work were asked. The respondents were required, for example, to evaluate formal education in order to agree that work is important in at least one instance. It should be noted that a different approach to asking the question might produce quite different results.

Attitudes Toward Education. The hypothesis predicted that the family that places a high value on education will be more likely to initiate medical care. The data presented in section VI gave little support to this contention. While the families with better educated heads are more likely to be high initiators, the measures of values placed on education are not significantly related to initiation of medical care.

The decision-maker who has a good education decides more often to initiate care when a family member has a serious symptom of illness than does the less educated person. This happens even if the lesser educated individual may value education. Some set of factors involved in the actual educational process apparently leads to a greater dependence on doctors, and placing a high value on education does not relate to this type of decision without the actual educational background. This finding suggests that placing a high value on education is not necessarily related to another set of values that are fairly common to those with better educations. While it is becoming more common to get an education and easier to see the benefits deriving from one, resulting in a greater value placed on education, only actually having a better educational background results in a greater readiness to visit the doctor for illness in this research.

Parochialism. The tendency to resist change, viewing ways used in the past as "best" ways, appears to

be more characteristic of those families that are not ready initiators of professional medical care. While not all the measures used are in support of the hypothesis, the weight of evidence supports the contention.

Since the lower socio-economic status family is considerably more likely to have a parochial view, this finding points up another obstacle in getting the lower status family to the doctor for illness. (There is also some indication in the data that parochialism is a more important determinant of initiation in the lower status group than it is for the higher status group.) As previously indicated, lower status families are hard to reach with informational programs on health matters, and this finding indicates that they are much more resistant to the new ideas that might be contained in such programs. The significance of the relationship between parochialism and initiation of medical care illustrates the circular nature of poverty; families that need to be informed on matters such as health care to break the habits of poverty are unlikely to get information, and when they do they are unlikely to accept new ideas that conflict with their parochial views.

Powerlessness. The family that feels that a visit to the doctor is not going to benefit them is less willing to undertake such a visit. All of the measures of powerlessness are related to initiation of medical care at a significant level or a level approaching significance. This supports the proposition that predicted an inverse relationship between the two variables.

Pessimism regarding the chance of poor persons in this society is particularly significant in the way it relates to initiation of care. Those families that feel the poor are only getting poorer are much less likely to visit the doctor. The Guttman scale measuring powerlessness also is highly related to initiation of medical care. Combined with the finding that lower socio-economic status families are the most likely to display powerlessness, these findings suggest a further reason for the lower rate of initiation of professional medical care among lower status families.

Several conclusions seem reasonable from the data. Lower status families know less about illness, have less available ways of learning about it, are more suspicious of the doctor, and, perhaps as a consequence of this constellation of factors, are less likely to feel that they can accomplish anything for an ill family member by visiting the doctor. This constellation of factors may prevent the lower status family from defining symptoms of illness as indicating a need for a visit to a doctor or dentist. The inability to define the situation, in turn, leads to an unwillingness to act to alleviate the problem by seeing the doctor. As a result, these families see the medical professional only when other courses of action are clearly inadequate; that is, when there is a dire medical emergency facing the family.

Important Variables in the Decision to Initiate Professional Medical Care

As suggested by the literature review and demonstrated by the data in this research, the family's socio-economic status is an important factor in the way it behaves in seeking medical care. The family with more resources is more likely to seek medical care. This finding is, however, considerably modified by other variables. For example, there appears to be some basic level of income that precludes a consistent program of medical care; this level is somewhere below $3500. In the sample used in this study, all families above this basic income level initiated care at about the same rate. This finding suggests that a number of other variables have an effect on the decision to initiate a visit to the doctor when illness occurs in the family.

There are two major types of variables that further discriminate between those families that readily initiate a visit to a doctor or dentist and those that do not. First, there are variables that distinguish between initiation behavior for all socio-economic status levels, and second, there are variables that distinguish between behavior of the lower and higher socio-economic status families.

Variables that discriminate at all socio-economic status levels. Amount of health information, age of the head of family, rural or urban nature of the place of residence, a parochial view toward change, powerlessness, and attitude toward doctors are variables that, in this research, differentiate between families that initiate medical care readily and those that do not. Education of the head of family, but not merely a value placed upon education, is also a discriminant factor in initiation behavior at all levels.

A theme runs throughout these variables; they are all in some way related to the family's ability to get health information, or to the amount of health information already available to the family. The findings indicate that the family that is informed in a medical sense is the family that visits the doctor when illness occurs.

Differences in the willingness and ability of the family to obtain and use information about health apparently lead to differences in the way the family acts when faced with illness. Information about health is less available, less acceptable, and less useful to the low income family, the rural family, and

the family that has a poorly educated decision-maker. These families are likely to resist new ways of handling illness and often feel that their efforts to prevent illness or obtain a cure are not going to meet with success. In combination with an inability to get to medical help easily, either because of distance or unavailability, such families are quite likely to neglect needed medical care. These families are numerous in Montana.

Variables that Discriminate Between the Lower and Higher Socio-economic Status Families. Ability to pay by virtue of having health insurance and, to some extent, attitude toward doctors are the two variables that discriminate sharply between the two-socio-economic status groups.

The lower status family that has health insurance is much more likely to visit the doctor for illness. The same is not true for the higher status families. In fact, the higher status family is somewhat more likely to initiate a visit if it does not have health insurance. Two conclusions are obvious: (1) ability to pay the doctor has a strong effect on the ease with which the family initiates medical care, and (2) the socio-economic group which is most likely to benefit from programs designed to provide third-party payment of medical bills is at the lowest level. Combined with a lack of health information, generally unfavorable attitudes toward the medical professional, a sense of powerlessness, and a resistance to change, the relative inability of low income families to pay for medical care constitutes a formidable obstacle to initiation of professional medical care.

Virtually all of the factors that discriminate between the family that initiates readily and the one that does not are found more often in the low socio-economic status group. Income, although an important factor, is part of a constellation of variables that relates to initiation of medical care. Health information, attitudes toward doctors, attitudes toward change, and attitudes about the efficacy of medical care all contribute to the decision to see the doctor when illness occurs. Increasing income or otherwise increasing the ability of the poor family to pay for medical care will strengthen the possibility that members of the family will get to the doctor. However, programs designed to bring information about health matters and change prevailing attitudes toward health and professional medical care are necessary in conjunction with increased ability to pay. Otherwise, as has been the case in so many programs, many of the lower status families will still not get to the doctor or dentist except when the illness becomes disabling.

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